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A History of the Syrian Air Force 1947-1967

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KING'S COLLEGE LONDON
FACULTY OF ARTS AND HUMANITIES

Dissertation

A History of the Syrian Air Force 1947-1967

By

Noam Hartoch

Submitted in partial fulfilment of the requirements for the degree of
Doctor of Philosophy

July 2015

Abstract

Shortly after gaining independence in the summer of 1945, the Syrian government set about to form the Syrian Air Force (SAF). Though devoid of personnel and aircraft and lacking experience and tradition since France, the mandatory power in Syria in 1920-45, had been reluctant to train Syrians in the art of air warfare, the nascent SAF scored some limited successes in the 1948 war but lost its momentum after a mere three months of fighting.

A lengthy period of restructuring followed, during which Syria underwent countless military coups which profoundly destabilized the country and had a marked effect on the SAF. In tandem with the internal upheavals, the ascent of the Pan-Arab Baath party brought about a gradual severance of political and military relations with the west, particularly Britain, and a shift to the Soviet sphere of influence, something that not only ensured a massive flow of modern arms but also brought about close cooperation and coordination with the Egyptian military establishment, particularly the Egyptian Air Force (EAF), culminating in the establishment of the ill-fated United Arab Republic (UAR).

With the entrenchment of the Baath's pan-Arab ideology in Syrian political and military life, anti-Israel rhetoric and activities increased to the extent that by the early 1960s the Jewish state had become Damascus's major security concern and bitter foe. Border skirmishes gradually reached a climax that saw Syria and Israel locked in the second full-scale war in two decades. Despite better equipment and training, the SAF failed to achieve any success, however minor.

Drawing on a wealth of hitherto untapped archival sources, this dissertation is the first academic attempt to offer an in-depth review of the history and development of the SAF from its inception to the aftermath of the 1967 war. The work's main insight is that the SAF's professional decline was a direct outcome of the pervasive political intervention in military affairs, something a modern air arm, as a highly professional and technologically advanced body of people and material, cannot tolerate. As a result, it found itself in the impossible position of being expected to act as the defender of the nation while being deprived of the necessary means to confront Syria's most formidable military foe.

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Introduction

The string of upheavals that rocked the Middle-East since December 2010 reached Syria in March 2011. The declared intent of the various rebel factions has been to overthrow the Baath regime and its current leader Bashar Assad, son of Hafez Assad, SAF commander (1963-66), defence minister (1966-70) and head of state (1970-2000). The Assad dynasty has not only ruled Syria under the facade of the Baath Party but has also been the protector of the Alawite minority (about 10 per cent of the population), to which it belongs. Like Hafez Assad, many Alawites viewed the military as the best vehicle for social mobility and political power. This 'investment' paid massive dividends by allowing the tiny community to dominate the country's predominantly Sunni population for decades. This enabled Bashar to ride the tidal revolutionary wave for nearly four years (with a little help from Tehran and Moscow) despite initial predictions to the contrary.

Almost from its inception, the Syrian Air Force (SAF) was widely used by the regime to protect its interest, though it was never intended to carry out counterinsurgency operations being primarily aimed at confronting the Israeli Air Force (IAF). Consequently, when the 2011 civil war erupted the SAF could initially field only very limited resources, mainly helicopters, which dropped ammunition on rebel formations and the civilian population. The SAF's intervention in the civil war, according to a Turkish military source, was the 'biggest morale booster for the struggling ground forces'.¹ However, the force suffered heavy losses in these operations as its limited resources against shoulder-launched anti-aircraft missiles were quickly exposed.²

This dissertation describes the history of the SAF from its inception in 1947 to the June 1967 war. It argues that the SAF's initial role as 'defender of the nation', maintained during its formative years, was gradually transformed into what can be best described as 'defender of the regime'. This was particularly true following the Baath Party's ascent to power in 1961. The SAF accumulated considerable power over the years due to the fact that its former commander rose to the position of a national ruler, and this had a marked effect on its development and the

¹ 'Syria retains deep-strike capability', *Janes Defence Weekly*, 1 January 2014, p. 20.

² In 2011-13 the SAF lost over 100 aircraft, mostly due to ground fire. Some aircraft were captured intact in air bases overrun by rebel forces. *Ibid*, 5 September 2012, p. 23

identity of its senior officer corps whose working synergy with the regime's interests became increasingly evident.

Literature Review

Despite the rich literature about various conflicts and wars in the modern Middle East, including the Arab-Israeli conflict, the Gulf wars, and the Lebanese civil war, there is a paucity of scholarly writing on Arab military establishments and armed forces in general and Arab air forces in particular (in glaring contrast to the extensive study of the Israeli armed forces and air force).

Col. Eliezer ('Lassya') Galili, editor of the IDF publishing house (Maarachot), published in Hebrew in late 1948 the first known book on the Arab armies after Israel gained independence. It reviews, among other things, the development of the Syrian army, albeit providing little information on the SAF itself. The book is largely based on IDF intelligence, and as a result, in order not to associate the writer with his sources (the majority classified at the time of writing), the author used the nickname 'Agra'.³

In 1966 Avigdor Shahan published the book 'Wings of Victory' in Hebrew.⁴ This was an expanded version of his MA thesis. The book provides a potted history of the SAF and describes in detail for the first time its involvement in the 1948 Palestine War. Shahan was given partial access to documents at the IDFA, and his account of SAF operations during the war was the most comprehensive and accurate published at the time.

In 1969, the noted scholar of Middle-Eastern history, Eliezer Be'eri, published his important book in Hebrew, Army Officers in Arab Politics and Society, with an English version following a year later.⁵ The book provides an in-depth review of Arab officers' struggles for power within their respective armies, their social background, and their involvement in the numerous military coups. Be'eri briefly mentions SAF officers who took part in the political turmoil in that country during the numerous coups that took place after the Palestine War and

³ 'Agra' (Eliezer Galili), The Arab armies in our Times (Tel Aviv: Maarachot, 1948).

⁴ Avigdor Shahan, Wings of Victory (Tel Aviv: Am-Hassefer, 1966).

⁵ Eliezer Be'eri, Army Officers in Arab Politics and Society (London: Praeger/Pall-Mall, 1970).

during the UAR period. The book's shortcoming is in the lack of primary sources, with most references made to books and daily newspapers. Twenty years after the 1967 war, a Jordanian scholar published what is considered by many to be the best account of that war on the Jordanian front.⁶ It naturally focused on describing the *Royal Jordanian Air Force* (RJAF) operations during the war but also related to the SAF and its abstention from coming to the RJAF's assistance. This was despite being five times larger, and a signee to the Unified Arab Command (UAC) agreement to combine forces against Israel.

In 1992 a former US Army Colonel published a book on the Arab-Israeli wars between 1948 and 1973.⁷ Yet, while his analysis of the 1973 war is rather comprehensive, the same cannot be said about the wars of 1948 and 1967. There is a lack of detail and accuracy as far as air operations are concerned. The author states, for example, that the SAF had 'modern combat fighter bombers' during the 1948 war (p. 17), and '15 Tupolev Tu-16 bombers' during the 1967 war (p. 337). In both cases this is factually wrong.

A study of Arab military effectiveness between 1948 and 1991 was published by Kenneth Pollack, a former military analyst at the US Central Intelligence Agency and National Security Council, on the basis of his doctoral dissertation.⁸ It offers a comprehensively analytical, rather than historical, study of six Arab forces, including the Syrian army. While it provides a detailed analysis of the Syrian Army's operations during the 1948 and 1967 wars, the SAF's involvement in the Palestine War is mentioned only by passing. Pollack points out the superiority of the IAF during the 1967 War and its almost undisturbed air offensive on the Golan Heights, but fails to attribute the success to the SAF's abysmal failure to exploit the IDF/IAF's total commitment to the southern front during the first hours of war. Pollack correctly notes, however, that the SAF lacked intelligence and employed a haphazard method of conducting operations, failing to disperse its aircraft effectively when news of the EAF's destruction on the ground began to arrive.

⁶ Samir Mutawi, *Jordan in the 1967 War* (Cambridge: Cambridge University Press, 1987).

⁷ Trevor Dupuy (Col, USA ret.), *Elusive Victory* (Dubuque: Kendall/Hunt, 1992).

⁸ Kenneth Pollack, *Arabs at War* (Lincoln: University of Nebraska Press, 2004).

In 2008 two Arab scholars at American academic institutions published a book on Iraq's armed forces.⁹ The book covers the years 1921-2003 but only mentions the Iraqi air force in few passages while completely ignoring its help to the SAF during the 1948 war. Only two pages are devoted to its establishment in 1932, though more detailed accounts cover much later periods, in particular the 1980s war with Iran and the ensuing Gulf wars. Accounts of the formative years in between are lacking despite the book's subtitle 'An analytical history'. Use of primary source (from British sources) is limited to the period covering the first ten years.

In 2009 Oren Barak, a senior lecturer of Political Science and International Relations at the Hebrew University of Jerusalem, published a book on the Lebanese Army. Unique in its study of that country's army, the book, however, ignores almost completely the Lebanese Air Force (LAF), founded four years after the army's formation in 1945, and is more of a sociological study of the military and its interaction with Lebanese society. The intense LAF involvement in the 1975-90 civil war is not mentioned at all.¹⁰

Two popular books have discussed the Egyptian and Saudi air forces. The first, Phoenix over the Nile,¹¹ by David Nicolle and Lon Nordeen, mainly covering the period 1930-56, is partially based on limited archival documentation. These primary sources are RAF reports held at the National Archives in Kew (Public Record Office at the time). Although Nicolle enjoyed good connections in Egypt and masters the Arab language, both authors were not given direct access to Egyptian archival records save for permission to peruse pilots' log-books, potentially a good source for gleaning information on aircraft and missions flown, fellow air crew members etc. Later year accounts are based on secondary sources and interviews with leading EAF pilots and commanders. It is interesting to note that this book includes a two and a half page appendix on the SAF between 1946 and 1958, based on an RAF report dating back to 1952, two interviews, and a reference to Patrick Seale's biography of Assad. The chapter is generally accurate, but refers mainly to aircraft acquisitions. A very sketchy two-page reference, within a

⁹ Ibrahim Marashi and Sammy Salama, Iraq's Armed Forces: An Analytical History, (London: Routledge, 2008).

¹⁰ Oren Barak, The Lebanese Army, A National Institution in a Divided Society (Albany: State University of New York Press, 2009).

¹¹ David Nicolle and Lon O. Nordeen, Phoenix over the Nile (Washington DC: Smithsonian Institution Press, 1996).

12-page chapter, is made to the United Arab Republic (UAR), which stresses the EAF's contribution to the union, and only marginally mentions the SAF.

The second in-depth book on an Arab air force, Ronald Stewart-Paul's The Royal Saudi Air-Force,¹² was published in Britain by British Aerospace, a supplier of combat aircraft to the Royal Saudi Air Force (RSAF) since the early 1960s. It covers the period from the mid 1920s, when Britain assisted the kingdom and provided a nucleus of aircraft and infrastructure, and concludes with the RSAF's participation in the 1991 Gulf War. The book was written by a former RAF Air Marshal who was given partial access to official RSAF records, though these are not quoted and referenced. It does, however, contain original documents and photographs, and as such, is more of a public relations book, rather than an objective academic study.

As for the SAF, there is no comprehensive accessible scholarly study of this force outside Syria itself. Rather it has been tangentially discussed in books or magazines on Syrian politics and/or on Arab military affairs. Thus, for example, in his memoirs of the 1948 war, Lt.-General Amin Nafoury, one time commander-in-chief of the Syrian army, dedicates a whole chapter to the SAF operations during the 1948 war. Not an aviator himself, Nafoury's recollections of the air force during that war are sparse, sketchy and naturally biased, the author having served as a lieutenant during the fierce Mishmar Hayarden campaigns, and the majority of his memoirs are dedicated to the ground war.¹³

Some books, remotely related to the Syrian military must be mentioned here, though most completely ignore the SAF. Among these, Gordon Torrey's Syrian Politics and the Military 1945-1958¹⁴ was a pioneering research in that it was the first book to specifically discuss the close linkage between army officers and politicians in Syria. Yet the book does not discuss the evolution and operation of the SAF, nor does it refer to SAF officers in particular. This leaves the reader to infer that their relations with the political system were very similar to those of army officers. Torrey, for example, completely ignores the assassination of SAF C. in C. Muhammad

¹² Sir. Ronald Stewart-Paul, The Royal Saudi Air Force (UK: Stacey International, 2001).

¹³ Amin Nafoury, al-Jaish al-Suri fi Filastin Am 1948 (The Syrian Army in Palestine in 1948), in, al-Fikr al-Askari (Syrian Army Magazine), Damascus, July 1979.

¹⁴ Gordon Torrey, Syrian Politics and the Military 1945-1958 (Columbus: Ohio State University Press, 1964).

Hassan Nasser in July 1950, a clear act of political intervention in the military, as well as the numerous and frequent dismissals of SAF commanders whenever the current ruler was deposed. Likewise, Pesach Malovany's recent study of the Syrian army, though based primarily on two books authored by the then Defence Minister Mustafa Tlas, and with no reference at all to primary sources.¹⁵

The SAF is again only marginally discussed in Eli Podeh's book on the UAR era. Podeh, a Hebrew University Middle East history professor, argues that, contrary to the common wisdom, the UAR experiment did not help the SAF since Egypt took great care to ensure that it was degraded to the level of a secondary player in what was supposed to be an equal union partnership. Podeh, however, fails to mention that the EAF refused to return combat aircraft supplied by the Soviet Union on Syria's behalf, thus depriving the SAF of almost its entire modern inventory.¹⁶

Andrew Rathmell wrote his dissertation on the symbiosis between politics and the military in Syria after the Palestine War and up to the end of the union with Egypt. He argues that Syria's decision to move towards the eastern bloc stemmed from US President Eisenhower's unfriendly attitude towards the Arab states which in their view was biased and not anti-Israeli enough. The author does not mention the bitter disappointment within Syrian circles of Britain's attitude towards the supply of weapons (particularly Meteor aircraft) to the SAF in the mid 1950s, one of the main reasons for Syria's abandonment of the West.¹⁷ Patrick Seale's biography of Hafez Assad is unique in that the author gained the dictator's trust and spent many hours interviewing him. Assad shared his memoirs from his pilot cadet days and recalled his famous,

¹⁵ Pesach Malovany, Out of the North an Evil Shall Break Forth (Tel-Aviv: Contento de Semrik, 2014; Hebrew).

¹⁶ Eli Podeh, The Decline of Arab Unity (Brighton: Sussex Academic Press, 1999).

¹⁷ Andrew Rathmell, Secret War in the Middle-East - The Covert Struggle for Syria (London: Tauris, 1995).

almost fatal accident at night. However, as he almost stopped flying after 1958, his recollections are confined to the SAF's early years.¹⁸

The study of Arab armies generally, and Arab air forces in particular within the Arab world, has been limited, the majority of studies being carried out within the military establishments of the respective states. Out of those works known outside the Arab world, those written by Glub Pasha and Labib are memoirs rather than historical research. The former was the commander-in-chief of the Arab Legion (the name the Jordanian army was known then) during its first decade and the latter was a high ranking pilot in the Egyptian Air Force.¹⁹ A history booklet of the RJAF, which is more in the format of a photo album, along the lines of the book on the RSAF mentioned above, was authored by the widow of Muwaffaq Salti, a young pilot who was killed in air combat with an IAF aircraft in November 1966. This work is more of a public relations work destined to praise the RJAF, dealing only vaguely in its failures, thus can hardly be taken as an objective study.²⁰

The other works were all commissioned by the respective ministries of defence, and as such can be regarded as serving a hardly objective agenda. Though this does not imply that they do not, at least partially, contain an accurate account of events. No less important than the narrative itself is the interpretation given to historical events. In all cases the works tend heavily to tilt in favour of the Arab military, leaving out a serious and professional analysis of poor performance during the respective air campaigns.²¹

¹⁸ Patrick Seale, Asad-The Struggle for the Middle-East (Berkeley: University of California Press, 1989).

¹⁹ Sir. John Bagot Glubb, The Story of the Arab Legion (London: Hodder & Stoughton, 1948); Air Marshall Ismail Labib, The Third Arm - A History of the Egyptian Air Force (Cairo, year unknown).

²⁰ Patricia Salti, The Royal Jordanian Air Force (Amman: Jordan National Library Deposit, 2007, No. 726/3/2007).

²¹ Center for Military Studies, The History of the Syrian Army (Damascus, 2001-2002); Iraqi Ministry of Defence, History of the Iraqi Armed Forces (Baghdad: Ministry of Defence, 1988; part 17 describes the establishment and development of the Iraqi Air Force); Nagi Sultan, al-Tarik al-Askari li-l-Yaman (Aden, 1976); Brig. Ali Sayed Edroos, The Hashemite Arab Army 1908-1979 (Amman: The Publishing Committee, 1980).

By way of redressing this lacuna, this dissertation offers the first comprehensive examination of the formation, development, and operation of the SAF, based on a variety of primary sources. As such it adds to the knowledge of Arab military history, in particular the evolution of the air power element, illuminating an air force about which little is known outside its boundaries. It also helps redress the research gap in the study of Israeli and Arab military affairs, whereby the story is often told from the former's perspective (due to the far greater availability of archival source material) to the detriment of the latter's narrative. This dissertation, albeit partly, due to the absence of Syrian primary sources, redresses this imbalance by describing the air campaigns in the 1948 and 1967 wars - the foremost Arab-Israeli military encounters - from the Syrian perspective, as is reflected from a detailed review of air operations, their background and effect.

Thesis and Structure

The main thesis of this study is that a sophisticated element of any modern armed element, such as an air-force, requires certain basic conditions to enable it to carry out its missions in the best possible way. One condition is that the air force is run according to professional lines and principles, free as much as possible from non-professional interference or considerations. This thesis, aims at presenting the case that political interference and non-professional considerations do exert a disproportionate impact on any modern air force. The case of the SAF clearly serves as an example, to the extent that it deprived it from carrying out its two basic missions: (a) Defending Syrian airspace from enemy intrusion and preserving air superiority; and (b) Assisting the ground troops by keeping a clear sky over them and enhancing the ground *manoeuvre* by providing close support to its own forces while attempting to destroy or at least disrupt the movement of enemy ground forces. This deficiency happened at least twice between 1948 and 1967 (and yet again in 1973 and 1982, though these cases are outside the scope of this work) causing Syria to lose both wars and damaging the country's strategic interests.

While the SAF enjoyed some success in fulfilling its basic tasks during the 1948 Palestine War, it failed completely during the numerous border clashes between 1951 and 1967

and the large-scale war of June 1967. The relative success in 1948 might be attributed to the as yet small-scale political meddling within the seven-months-old air service, and the aid provided by foreign mercenaries. The poor performance in later years can be linked directly to increased political intervention in SAF affairs, culminating in the numerous coups, each coup bringing along a new C. in. C., at times a non-aviator yet loyal to the ruler - a virtue in itself. This was highlighted by the appointment of politically loyal but unprofessional commanders, most of them recruited from services other than the air force, and by giving marked preference to the preservation of the regime through the use of air power. This led to the neglect of one of the SAF's two main objectives: keeping the skies over Syria clear of enemy aircraft, as the internal political opposition never possessed an air force of its own; and promoting the army's strategic and tactical goals by providing air cover and support to the ground forces. Again, because of the lack of sophisticated weaponry in the hands of the civilian opposition, this capability was not required.

This dissertation is divided into seven chapters, arranged chronologically, and focusing on the main events of the period under discussion. The first chapter provides a background to the formation of the military in Syria during the French Mandate and prior to the country gaining independence. This infancy period was marked on the positive side by the building of an airfield infrastructure which would form the basis for the SAF's future air bases. On the negative side, the French declined Syrian pleas for the training of pilots, navigators, engineers, mechanics and other professions critical to any modern air arm. This placed the SAF in a disadvantaged position vis-à-vis the nascent Israeli air force which enjoyed a large corps of professionals, some locally trained by the British, some volunteers, as well as Jewish volunteers from abroad.

The second chapter describes the initial steps taken to form an air force in Syria, the initial acquisition of aircraft and the raising of a small group of pilots and navigators backed by foreign mercenaries to encounter the first challenge of confrontation with Israel in 1948.

The third chapter details SAF operations over Palestine during the months of April to July 1948. It tries to analyze the air activity from the Syrian viewpoint, pointing to the positive and negative aspects, praising the initiative and efficiency at the start of operations, and

explaining the gradual decline up to the point where the SAF was no longer a factor in the campaigns.

The fourth chapter describes the SAF's recovery from the dire results of the 1948 war. It focuses on the efforts to enhance its transformation from a tiny and restricted force to the status of a modern air arm theoretically capable of dealing with an ever expanding Israeli air force, which was soon to become the SAF's arch rival in the air.

The fifth chapter describes the changes in the SAF as a result of the shifting political climate in the Middle East and the gradual transition from west to east, culminating in a total reliance on the Soviet Union for training, supply and acquisition of manpower and hardware. This period brought about the formation of the UAR which at the beginning was seen as a professional boost to the SAF as it tightened its ties to Cairo and through it to Moscow. However, it soon proved a bitter disappointment leading to the decline of the SAF in the immediate years following the UAR's breakup.

The sixth chapter again focuses on the relationship between the military and politics, the so-called army-politics symbiosis, the growing influence of the Baath ideology on security matters, and the heightening of tensions with Israel, leading to numerous air clashes, during which the SAF's weakness was exposed.

The concluding chapter describes the SAF immediately prior, during and after the 1967 war with Israel. It explains why, despite having excellent opportunities, the SAF failed to exploit them and was unable to assist the army in the ground war while losing almost two thirds of its assets to the superior Israeli air force. The chapter also describes the initial steps taken by the Syrian leadership to redress the numerous failures and rebuild the SAF in order to prepare it for the next (unavoidable) round.

1 Aviation in Syria during the French Mandate 1920-45

As with so many other places, the First World War has transformed the map of the Middle East as the collapse of the region's millenarian imperial order gave way to an international system based on the novel idea of the nation-state.

At the Paris Peace Conference, the foremost proponent of modern-day national self-determination, US President Woodrow Wilson, sought to overturn the secret wartime agreements (notably the 1916 Sykes-Picot agreement, which the British themselves had been busy wrecking) by offering a mandatory system associated with another brainchild of his - the nascent League of Nations.²² Initially it was suggested that the territories of the Austro-Hungarian, Russian, and Ottoman empires be placed under the mandatory control of a single power, accountable to the League. Annexation was to be forbidden, and the mandatory power was to oversee the mandated territory from tutelage to eventual independence.

At the end, the territories of the defunct Austro-Hungarian and Russian empires were excluded from the mandates system and given immediate independence; by contrast, it was decided that 'the well-being and development' of those German and Ottoman territories 'inhabited by peoples not yet able to stand by themselves under the strenuous conditions of the modern world' formed 'a sacred trust of civilisation and that securities for the performance of this trust should be embodied in the constitution of the League of Nations'. More specifically, it was agreed that 'Armenia, Syria, Mesopotamia, Palestine and Arabia must be completely severed from the Turkish Empire' and that certain communities in these territories 'have reached a stage of development

²² See: Efraim Karsh and Inari Karsh, 'Empires of the Sand: The Struggle for Mastery in the Middle East, 1789-1923' (Cambridge, Mass.: Harvard University Press, 1999), Chapters 16-18.

where their existence as independent nations can be provisionally recognized subject to the rendering of administrative advice and assistance by a mandatory power until such time as they are able to stand alone'.²³ Within this framework, Britain became the mandatory for Iraq and Palestine, and France - for Syria and Lebanon.

The French control system

Having seized control of these territories in the summer of 1920 after expelling Faisal ibn Hussein, the emir of Mecca and the celebrated hero of the 'Great Arab Revolt' who in March 1920 had crowned himself King of Syria with Britain's support, the French quickly realized that the task they took upon themselves was more of a burden than a gain, a source of embarrassment and an irritant as far as the day-to-day running of the country was concerned. This soon translated to a policy of apathy and neglect, a far cry from the governing of those territories considered intrinsic French colonies such as Algeria or Morocco, as Paris recognized at a very early stage that the mandate was actually what it was supposed to be: a corridor to national self-determination rather than a euphemism for a new form of colonial domination.

One of the major problems of French rule in Syria was the rigid administering of the country, leaving almost no freedom to indigenous participation in state affairs, and completely disregarding the delicate composition of Syria's population. In typical divide and rule fashion the French devised a federative system under which several communities were given their own 'state', the size and resources of each were often a corollary of French interest in cultivating this

²³ 'Draft Resolutions in Reference to Mandatories', Foreign Relations of the United States, Paris Peace Conference 1919 (Washington, D.C.: Government Printing Office, 1942-47), vol. 3, pp. 795-796.

particular community rather than intrinsic needs. To make matters worse, they also took two key political decisions that were to enrage generations of Syrian nationalists: the creation (on 1 September 1920) of 'Greater Lebanon', within its present boundaries and with Beirut as its capital, and the dissection of large parts of the Aleppo region and their annexation to the autonomous Turkish province of Alexandretta, as a prelude to its annexation to Turkey in 1939.

Small wonder that from the early days of the mandate the French were saddled not only with numerous acts of small scale insubordination but also with a major revolt by the Druze community, which raged for two full years (1925-27) and spread unrest and mayhem throughout the entire country.²⁴ And it was during this revolt that the French made the first use of air power in Syria: the massive aerial bombardment of Damascus on 18 October 1925 resulting in 5,000 fatalities.

Apart from underscoring the decisive impact of airpower, the revolt resulted in a revised thinking within the French government about the future of Franco-Syrian relations, opening new opportunities for native Syrians to participate more widely in the daily running of state affairs, albeit to a highly limited extent. Attempts to establish a joint French-Syrian airline - the proposed *Compagnie Internationale de Navigation Aérienne* (CIDNA) - in July 1927, came to naught due to frequent disputes stemming from the tense relations between the partners to be but also from fear of British influence on the airline, which had background connections in British-ruled Iraq.

²⁴ Philip S. Khoury, Syria and the French Mandate (Princeton: Princeton University Press, 1987), pp. 27-45; Stephen Hemsley Longrigg, Syria and Lebanon Under French Mandate (Oxford: Oxford University Press, 1958), p. 279.

The company was supposed to operate an Aleppo-Baghdad service via Rutbah Oil Wells in Iraq.²⁵

In 1928 a national bloc of parties was allowed to form, with the leader of the Istiqlal (Independence) party, Shukri Quwatly, demanding a constitution and the reunification of 'Greater Syria'. A constitution was written and adopted in 1930, yet not only did it not urge the desired inter-state unification (i.e. Lebanon's annexation to Syria) but it also left the major government and administration offices in French hands, including defence and transportation (which included the construction of airfields and development of civil aviation). In July 1933 the newly constructed airfield at Neirab, only three miles away from the major city of Aleppo, was inaugurated, replacing the old Muslimieh aerodrome dating to Ottoman times.²⁶

Substantial political change came to Syria in 1935-36 under Leon Blum's liberal-socialist government in Paris, and a treaty was worked out which finally gave Syria its first nationalist government under Hashem Atassi, head of the nationalist alliance. A year later some important local governmental functions were passed to the central government in Damascus.²⁷ A small flying club, the *Aero Club de Syria et du Liban*, was founded in Damascus in 1936 with five light aircraft which were mostly flown by French officials, such as Henri Tresch, the local director of Air France, and which denied access to the Syrians who showed interest in using them for basic flying training. During the allied invasion of Vichy-ruled Syria in May 1941, this force comprised nine aircraft, all of them of French origin (two Caudron Luciole, one of each - Caudron Aiglou, Phalene, Simoun, Potez 637, and three of unknown types), plus a de-Havilland

²⁵ CO730/131/6 & CO730/123/4, The National Archives (Kew; hereinafter TNA).

²⁶ Flight International Magazine, August 1933.

²⁷ Ibid, pp. 22-23.

DH60G Moth, an Airman 402 and a Miles Whitney Straight which were part of the earlier aero club fleet. The few surviving aircraft, most not of French types, were impressed into the RAF following a brief period of flying for the local Free French forces.

Other operators of civil aircraft during the mandate period included *Societe de Transports du Proche Orient*, an associate airline of the Iraqi Petroleum company based at both Tripoli and Damascus and operating two de-Havilland Rapides and a single Caudron Goeland transport aircraft. The only known example of local private owning of aircraft was a Farman 190 built in 1929 which since May 1934 was part of the Societe de Transports du Proche Orient's fleet, and was sold in December 1937 to one George Goumin in the Lebanese town of Rayak, who operated it until April 1939. This four-seat aircraft was frequently flown between Rayak and airfields in Syria carrying passengers, freight and mail.²⁸

World War II and its impact

The outbreak of WWII, France's capitulation to Nazi Germany and its partitioning into German-occupied and French-governed parts brought about the creation of the Vichy government, whose forces in Syria were defeated by British and Free French armies, passing control over Syria to the Free French authorities. Its leader Charles de-Gaulle promised to grant Syria independence, and in 1943 Quwatly was elected as president. Gradually, the French grip on Syria lessened and by 1944 fourteen administrative departments, run by the French since 1920, had been taken over by the Syrian government leaving, however, the French in control over security matters.

²⁸ British Civil Aviation News, 8 October 1960, p. 74.

It seemed as if the Syrians were bound to steer their country's defence towards independence without any military experience, save for the theoretical training achieved by those who attended the academy at Homs; but then an unexpected opportunity arose when hundreds of Syrians fled Free French-ruled Syria to join the Nazi forces in occupied Europe.

In 1940-41, these Syrians were given a chance to see real combat as the German Army (the Wehrmacht) began recruiting volunteers from the different Arab countries, prompted by the 1941 Iraqi uprising of Rashid Ali and the Nazi belief that the anti-British sentiment among the Arabs could assist Berlin's cause. On 23 May 1941 the Higher Command of the German Army (Oberkommando der Wehrmacht, OKW) issued directive number 30 under the heading 'Middle East', personally signed by Hitler, with the aim of preparing for a German invasion of the region and planning the encircling of British-held territories by combining forces with the Afrika Korps coming from Egypt, and other units, particularly from Turkey and the Caucasus arriving from the north and east. Part of the directive included the recruiting of native Arabs by convincing them that cooperation with the Germans would contribute not only to the defeat of the British but also to the annihilation of the Jewish community in Palestine (or the Yishuv). For the purpose of coordinating these efforts, a special unit, Sonderstab F, was set up under the command of General Major der Flieger (Major General of Aviation) Hellmuth Felmy, a senior Luftwaffe staff officer. Although Felmy headed this unit professionally, a nominal figurehead more acceptable to the Arabs was required, and was found in the figure of the Mufti of Jerusalem, Hajj Amin Husseini.

During that summer, a German-Arab training battalion, the 845th, was set up as part of Sonderstab F. Based in the Greek town of Sunium, at the southernmost tip of Attica, the battalion's commanders battled for most of the time with the lax attitude of the volunteers and their degraded basic knowledge of military affairs. To add insult to injury, the loyalties of its several hundred Arab fighters were divided among three rival Arab-Nazi collaborators: Syrian guerrilla leader Fawzi Qawuqji, former Iraqi Prime Minister Ali, and the Mufti. As a Wehrmacht officer commented:

The Arabs showed themselves willing to learn; unfortunately they lacked imagination, and this made it difficult for them to understand the significance of the individual phases of a military operation.... the Arab attitude was that it was unnecessary to make a serious effort.²⁹

In these circumstances, it was only a matter of time before tension would build up between German instructors and Arab trainees and undermine the soldiering efforts. The responsibility for recruiting Arab volunteers was given to R. Ran, an advisor of diplomatic rank and special plenipotentiary for the German Foreign Service office in Damascus, who worked closely with Qawuqji. In July 1941, following the occupation of Aleppo by De-Gaulle's forces, Qawuqji fled to northern Syria and from there to Germany where he joined the Mufti in Berlin. The local force of recruited Syrians was disbanded.

With the Ali revolt in Iraq defeated by the British, the Germans proposed that a new unit, called the Iraqi-Arabian Army, be formed to free Iraq from British rule, again under the

²⁹ Antonio J. Munoz, Lions of the Desert - Arab Volunteers in the German Army 1941-1945 (New York: Axis Europa, 2001), vol. 2, p. 5.

command of Sonderstab F, comprising five divisions, one of which would include some 500 Syrians. Though the idea was strongly supported by Hitler in his Directive number 32 of early December 1941, followed up by a plan by Husseini mentioning a group of Syrian officers, veterans of the Armee du Levant, who would head this army together with Palestinian and Iraqi officers, this 'Arab Legion' did not come to fruition during the Third Reich's time.

Still, in January 1942 the Mufti suggested the creation of up to two divisions formed from Syrian volunteers. This ambitious idea failed to materialize as bitter animosities between Husseini, Ali, and Qawuqji (so much so that Mufti blackened Qawuqji's image in the eyes of his Nazi patrons leading to his arrest)³⁰ disrupted the German initiative. Felmy thus realized that in order to get something out of the hopeless situation, integrating Arab volunteers into German units operating in Europe, North Africa, and Russia would have a much more beneficial effect. As a result, by April 1942 several Syrians captured during the fighting in Syria, had been recruited to a German battalion operating in Europe. Four months later another batch of Syrians was drafted to the 287th Special Formation of the Wehrmacht, winning their baptism of fire in armour warfare shortly afterwards. Many of these men would be part of the first Syrian armoured battalion facing the Israeli army in the 1948 war. Another important benefit of serving in the Wehrmacht was the ability to gain promotion to officer rank. Out of thirty Arabs, some of Syrian origin, fifteen would become officers by the time the unit was dispatched to the Russian front.

The 'German experience' enhanced the Syrian military's professionalism by contributing mainly to those NCOs and officers in the German forces who subsequently graduated from the military academy in Homs by giving them true command experience in a real fighting

³⁰ Karsh, Palestine Betrayed (New Haven: Yale, 2010), pp. 116-17.

environment. It, moreover, provided the nascent Syrian army with a hard core of battle tried educated soldiers and officers, some of whom studied in German universities. Although the participation of Syrian soldiers in direct Luftwaffe activities (e.g., as pilots or mechanics) were highly restricted, several Syrians gained first-hand experience in anti aircraft operations within the Sonderverband (Special Unit) number 288 stationed in North Africa, with some even volunteering to the 845th battalion's Arab Parachute Company, transferred to Rome following the collapse of the North African front, who were to form a Syrian paratroopers unit following Syria's independence and the creation of a paratroopers battalion in the mid 1950s. According to the Lebanese historian Mustafa Assad, German-trained Syrians were ordered in 1939 to destroy the railway line that linked Palestine with Lebanon and Syria. The operation was eventually not carried out, yet it shows that Syrians were trained in carrying out guerrilla warfare, which could come very useful in the forthcoming armed conflict in Palestine.³¹

Origin of the Syrian military

The League of Nations mandate for Syria stipulated that the mandatory power would establish a local militia force required for defending the country against external enemies and for ensuring law and order within its borders; only native Syrians could be enlisted in this force.³² Yet when France formed the first indigenous military force, the Armee du Levant, it comprised only a handful of Syrians with the majority of troops originating from a multitude of places - from members of France's own military establishment, to troops stationed in Paris's North

³¹ Oleg Valentinovich Romanko, 'Muslim and Hindu Volunteers in German Service 1941-1945', in Peter J. Huxley-Blythe (ed.), The East Came West: Muslim, Hindu and Buddhist Volunteers in the German Armed Forces 1941-1945 (New-York, Axis Europa Books, 2001), pp. 20-23, 207, 226, 241; Munoz, Lions of the Desert, pp. 3-7.

³² Longrigg, Syria and Lebanon, p. 376.

African colonies, to fighters from the Foreign Legion. It even included a small air element, although none of its staff was Syrian.

This state of affairs generated deep resentment among the Syrian soldiers who considered their comrades-in-arms inferior aliens. To overcome this sentiment and lessen tensions within the army, a special force known as the *Troupes Speciales* was formed in 1924, comprising some 6,500 troops commanded by 137 French and 48 ethnic Syrian officers. It included conscripts and volunteers from the various minorities in Syria, such as Armenians, Kurds, and Circassians, reflecting the country's variegated social structure; and although by 1938 the ratio of ethnic Syrian officers had dramatically risen - from 26% in 1928 to 71% - French officers held the higher ranks and the force remained practically under French control till the end of the mandate. The majority of the *Troupes* leadership came from wealthy upper class families, though they generally viewed the army as an opportunity to achieve an even higher social status, rather than a way of getting involved into politics or the economy, though this would change after independence.³³

An important French contribution to the future Syrian army was the establishment in November 1920 of a military academy, initially in Damascus, but from 1932 in the city of Homs. This enabled young Syrians to be trained in the various trades of war and attain the rank of officer, albeit not higher than that of a Major, studying in an environment influenced by the best of French military tradition. Many secondary-school graduates from the lower and middle classes regarded the academy as a means to improve their economic and social status, and as they enrolled in increasing numbers during the 1930s the composition of the officer corps

³³ Khoury, *Syria and the French Mandate*, pp. 79-80; Torrey, *Syrian Politics and the Military*, p. 44.

became more balanced with the upper classes rubbing shoulders with the less 'aristocratic' segments of Syrian society.

What differentiated the groups was their attitude towards political ideology, with the upper classes more inclined to accept French domination and the lower classes increasingly viewing the academy as a place where they could more easily realize their hopes, dreams, and ideals, notably the ideal of pan-Arabism and the attendant detesting of French political control in general, and continued domination of the Troupes in particular. This sentiment gained momentum during the 1940s, reaching its peak in the run up to the 1948 Palestine war, as the academy's chief instructor, the staunchly nationalistic Col. Jamal Faisal, instilled strong pan-Arab sentiments among the officer cadets.

Like the Armee du Levant and the Troupes Speciales the academy did not promote Syrian participation in flying courses, and the syllabus was confined to indoctrinating the art of ground warfare. However, since almost all SAF commanders-in-chief during the first decade of independence were non-aviators, they were all graduates of the military academy that gave them at least a basic understanding of the role of aircraft in modern warfare and the importance of integrating aerial operations into a ground offensive, which was to become a useful tool in planning and executing the initial offensive on Israel during the 1948 war.

Different courses of military development

Like their French counterparts, the local forces established by the British in mandatory Palestine - the Transjordan Frontier Force (TFF) and the Arab Legion - were commanded and

trained by British personnel.³⁴ This was partly motivated by the growing Arab-Jewish antagonism and London's reluctance to enable these Arab forces (no equivalent forces were established for the Jews) to exert a decisive impact on the future of Palestine, where, according to the League of Nations mandate, Britain was supposed to facilitate the establishment of a Jewish national home. But to no small measure this was a reflexive demonstration of the imperial impulse to prevent the emergence of potential sources of indigenous opposition. Thus, like French rule in Syria, Britain did not encourage the development of an air arm, potentially the most effective, hence dangerous, source of military opposition.

In an attempt to circumvent this restriction and lay the groundwork for a future Jewish air force, the underground Jewish movements created with a view to containing the surging Arab violence, notably the Hagana (Defence in Hebrew), sought to use civil aviation, where Jews were allowed to participate, for the preparation of a future cadre of pilots. The same was not possible in Syria, where the French rejected any idea of Syrian participation in the country's civil aviation activity, fearing that this might be used for the creation of an anti-French nationalistic pilot corp. Thus, when Syria decided to participate in the pan-Arab assault on Israel in 1948 it had to create an air arm from scratch, having no aircraft or pilots of its own.

The embryonic Jewish pilot corps received a major boost during WWII. Though British officialdom and military commanders in the Middle East were adamantly opposed to the establishment of an independent Jewish fighting unit (it would take Winston Churchill four full years after assuming the premiership on 10 May 1940, to prevail over his commanders and

³⁴ Transjordan was included within the Palestine mandate, but the grand ambitions of its ruler, Emir, later King, Abdullah ibn Hussein of the Hijaz, effectively severed it from Palestine and made it a self-contained, later independent emirate/kingdom.

bureaucrats and establish a Jewish Brigade Group that fought as part of the British army in Italy), they were amenable to individual Jewish participation in the British war effort, including the drafting of volunteers to the RAF as London's military position became increasingly dire. Though initially interested in recruiting mechanics, technicians and other technically-oriented craftsmen, while somewhat reluctant to offer them flying training, this attitude gradually changed as the RAF's losses in competent air crews grew and its urgent need for new pilots increased.

This stood in stark contrast to the attitude of the French mandatory government, which refrained from following the same practice. It must be noted, however, that the Vichy Air Force operated in Syria for a very short time and its requirements in replacement air crews was not as critical as that of the RAF, French rapid surrender meaning that only a handful of French aviators continued to fight, and consequently the losses were far less than those of the British.

Overall, of some 2,031 Palestinian Jews who volunteered for RAF service during WWII, thirty seven became accomplished air crew members, twenty of whom completed their pilot training. Nine became radio/wireless operators, and four each bombers/gunners and navigators. Although many served as clerks, cooks, stock keepers, plumbers, accountants etc., hundreds were trained as aircraft mechanics, forming the basis for building the Israeli Air Force's (IAF) engineering and maintenance corps. But the positive British attitude contributed more than RAF-trained professionals: it enabled local flying courses for young people who eventually joined the Hagana's Air Service (HAS) in November 1947, and upon its formation in May 1948, the IAF itself. No less than 48 pilots who graduated during the mandate period joined the IAF, of which 23 were trained by the commercial airline Aviron, 18 by the Palmach flying unit and seven by private flying schools. In fact, when the recruiting to RAF service began in 1940, there were no

fewer than 70 qualified pilots in the Yishuv. They were all trained by civilian institutions by permission of the British authorities.³⁵

When judging the importance of the British consent to train Palestinian Jews in the art of flying it suffices to note that the IAF commander during the 1948 war, his deputy, and one of the most notable IAF commanders (General Ezer Weizmann, future president of the State of Israel) were former RAF pilots. Sadly for the SAF, none of the pilots it could field in that war had any previous flying experience, not to mention combat experience with a foreign air force in a major war. Not a single Syrian was given serious flight training by the French while ruling the country. None was recruited into the Armee de l'Air (the French Air Force). Naturally, when the 1948 war erupted, the Syrian army high command found not a single pilot within the ranks to fill the crucial role of air force commander, and was forced to appoint high ranking infantry and artillery officers who had absolutely no idea of how to handle modern air warfare.

It must have been a major disappointment for the Syrian Army in 1945 to realize that of the hundreds of Armee de l'Air aircraft on Syrian soil, only a few could be absorbed into a future Syrian Air Force. The fate of the surviving French aircraft was diverse: those that were still flyable were taken back to France or North Africa, while others wound up in the Force Aeriennes Francaises Libres (the Free French Air Force of General De-Gaulle) and by 1945 they were no longer in existence.³⁶

³⁵ Yosef Shavit, Volunteers in Blue (Tel Aviv: Ministry of Defence Publishing House, 1995; Hebrew) pp. 12-26, 42-44, 47-54, 57-63, 147-53; Yedidya (Eddy) Kaplansky The First Fliers (Tel Aviv: Ministry of Defence, 1993; Hebrew), pp. 14-17.

³⁶ aerostories.free.fr/dossiers/AA/vichy/page11.html.

The situation in Palestine upon the British evacuation was much better since the RAF left many aircraft at the various air bases, some of which were in flyable condition, and some which necessitated only minor efforts to bring them to an airworthy condition. Furthermore, the mandate government was willing, though on a restricted scale, to offer some of these aircraft to the Yishuv.³⁷

To support the RAF units in Palestine and enable regular air connection with neighbouring countries under British influence (e.g., Egypt, Trans-Jordan and Iraq) the mandate government developed a modest airfield infrastructure during the 1930s. By the time Britain entered WWII, only three airfields were available in Palestine: Lydda (built in 1936) and the smaller airstrips at Ramleh and Gaza (built during the Ottoman rule). In 1943-45 several paved airfields and airstrips were constructed, including Haifa, Mahanaim (Rosh Pina), St. Jean (near Acre), Ramat David, Ein Shemer, Sirkin, Kalandia (north of Jerusalem), Ekron (Tel-Nof) and Kastina (Hatzor). All these were equipped with facilities which enabled the unrestricted operation of heavy transports and bombers, all having paved runways and hangar space.

The Syrian aviation infrastructure

The wide dispersion of landing grounds for aircraft in Palestine was in stark contrast to the sparse number of airfields and airstrips constructed by the French in Syria. The only real French contribution to Syria's aviation infrastructure was the drive to construct as many airfields as the Armee de l'Air, deemed necessary for maintaining this force's regional position. Most of the airfields were mere landing grounds or clay strips, which were rarely usable during rainy

³⁷ Ambar Ido, Eyal Eli, and Cohen Avi Capt., Roots of the Israeli Air Force 1913-1948 (Tel Aviv: Ministry of Defence Publishing House, 1988; Hebrew), pp. 375-76.

periods, but there were also some major facilities with paved runways which could be used all year round. These included the main airfield of Damascus-Mezze, located southwest of Damascus, Nejrab near the city of Aleppo, Deir ez-Zor located in the eastern part of the country, and Palmyra to where most non-combat aircraft of the SAF were repositioned during the 1948 war, as it was considered far enough to guard them from IAF attacks.

Soon after the French withdrawal, the Damascus-Mezze airfield, due to its relative developed facilities, became the SAF's main base, and the country's major international civil airport. Two crosswind runways, measuring 2000X55 and 1100X55 yards were paved and made suitable for unrestricted operations throughout the year. Within the SAF compound, the French built four aircraft hangars, maintenance sheds, communications station and a large fuel depot, used by the Shell Co. following the French Vichy defeat, three ammunition depots, including one underground facility, and meteorological equipment. Immediately after the 1948 war, the Syrians built a new four-storey control tower and three additional aircraft hangars.

The Nejrab airfield, situated near the village by that name, and some four miles southeast of Aleppo, had a single 2000X50 yards runway, one aircraft hangar, parking positions for up to 24 medium and heavy aircraft, an aircraft repair shop, communications station and fuel and ammunition depots. Following the Syrian takeover, the airfield became the SAF's central flying school.

The third most important airfield built by the French was at Deir ez-Zor, half a mile southeast of the city by that name. Contrary to Damascus-Mezze and Nejrab, operations at Deir ez-Zor were restricted to light planes due to lack of paved runways. Its only runways were two landing strips made of compacted earth and measuring 880X250 and 850X200 yards, which

could not be used after heavy rains. For sheltering aircraft, it had only one hangar. Deir ez-Zor also had an anchoring facility for amphibian aircraft along the Euphrates River, on the Syrian-Iraqi border, used by flying boats of Imperial Airways up to the beginning of WWII. Other airfields from French era include the following:

Name	Location	Runways (yards)	Facilities/Remarks
Hassjeh	North of the Havoar river	One 1860X165 One 970X750	Compacted earth runways, unusable after heavy rains
Homs	1 Mile west of the Homs Citadel	Two 1100X100 One 730X100	Clay runways, unusable after heavy rains, one hangar. Upgraded by the SAF in September 1949
Humeimah	12.5 Miles SE of Latakia	One 1600X65	Paved runway, upgraded by the SAF in September 1949
Latakia	3 Miles SE of Latakia	One 630X60 One 340X40	Grass runways, unusable after heavy rains
Ein-Arom	1 Mile SE of Eyn-Arom	Three 2000X100	Near the Turkish border. Adjoining an army camp
Palmyra	1.5 Miles NE of Palmyra	Three 1500X100	One hangar, small repair shop
Sahel al-Sahra	8 Miles NW of Damascus	One 1560X50 One 730X50	One paved and one dirt runway
Kamishli	0.5 Miles NE of the city	Two 1370X55	Unusable after heavy rains during the French era. Runways paved by the SAF in 1949

Having had no local civil aviation activity of any sort, the obvious reason for the wide spread of airfields across the country was for strategic military purposes, particularly since the beginning of WWII. In May 1941, Vichy Admiral Francois Darlan signed an agreement with the Nazi regime known as the 'Paris Protocols', which granted the Luftwaffe access to military installations in Syria, practically offering shelter and refuelling facilities to both the German and

Italian air forces. Painted in false Iraqi Air Force colours and insignia, these aircraft transited in Syria en route to Iraq to assist the Rashid Ali revolt, during the Anglo-Iraqi clashes.³⁸

The Vichy air forces in Syria at the height of their involvement there included up to 289 aircraft based at airfields in Lebanon and Syria, this massive force explaining the need for the newly constructed airfields. Despite the extensive dispersal of the aircraft among the various airfields, this force lost a staggering 62 per cent of its fleet to RAF bombardments. Soon after Syria was liberated from Vichy control and the British army took over, air battles between Axis and Allied air forces took place over Syrian skies. The first, on 14 May 1941, involved RAF strafing of the Palmyra airfield, but later on the Tenth Indian Infantry Division, led by Major General William 'Bill' Slim, was given the urgent task of overtaking the airfields so as to ensure British air supremacy over Syria. In his advance northwest from Iraq into Syria, the airfields of Deir ez-Zor and Nejrab (Aleppo) were soon liberated, and those at Palmyra and Damascus-Mezze were later taken over by a divisional British force, supported by units from Transjordan's Arab Legion. On 26 June, the Homs airfield was strafed by the Royal Australian Air Force, destroying five and damaging six French Dewoitine fighters. Pressed to make use of these airfields for Allied air forces, the British repaired the damage inflicted during the fighting, and by early 1942 all the airfields were fully operational once more.

Contrary to the situation in Syria, none of the airfields in Palestine were damaged during WWII, hence were readily available when the British left the country in May 1948. Having operated long range bombers (mainly B-17 Flying Fortresses) on bombing missions to Italy and Romania from air bases in Palestine, particularly Lydda and Aqir (Ekron), those facilities were

³⁸ *Ibid*, pp. 183-88.

equipped with long asphalt runways, in contrast to the Syrian airfields which were only intended for local and regional use and had much shorter runways, requiring their lengthening immediately after the 1948 war.

During the years 1923-50, the Iraq Petroleum Company (IPC) established a subsidiary company named the Syrian Petroleum Company Ltd., which obtained a concession to explore oil on Syrian soil, for which purpose eleven wells were drilled along the 532-miles-long 'Northern Route', stretching from Iraq through Syria and Lebanon all the way to the Mediterranean, terminating in the Syrian port town of Tripoli, from where the oil was exported by railway and sea. The French preferred the northern route to the southern one, which was slightly longer (620 miles) and connected Iraqi oil wells with the Port of Haifa in Palestine.

For obvious strategic reasons, the question of using either route was a constant source of friction between the British and the French. For the French mandate government it meant having to construct airfields along critical check points, which were part of the pipelines system, and for that purpose five facilities were built at Abba, five miles north of the Abba pumping station in eastern Syria, comprising two 1260 and 1200X50 yard runways, suitable for IPC's de-Havilland Rapide and Dove light transport aircraft; Dul'ah, seven miles near a pumping station by that name, having a couple of unpaved 1420X400 yard runways, unsuitable for use after heavy rains, with an adjacent aviation gasoline station and a communications post. The next three airstrips were built as a succession of landing grounds adjacent to the T2, T3 and T4 pumping stations,

(the latter two near Tadmur (Palmyra) and east of Tiya at positions N34 31'45" E38 44'10" and N34 32'55" E37 41'50" respectively) each capable of handling the IPC light transport fleet.³⁹

Reviewing the number of airfields and landing grounds constructed in Palestine compared to Syria, one cannot avoid noting the disproportion of having only 16 such facilities in Syria (three airfields with paved runways, and 13 smaller ones with clay, compacted earth or grass runways) as compared to 18 in Palestine (nine airfields with paved runways, and only nine non-paved facilities) given that Syria is almost four times larger than Palestine.⁴⁰

³⁹ 'The Syrian Air Force - An Overview', 1949, Israel Defence Forces Archive 27-895-1952 (hereinafter IDFA).

⁴⁰ Wapedia.mobi/en/Syria-Lebanon_campaign, pp. 2, 7; Shahan, Wings of Victory (Tel Aviv: Am Hasefer, 1966; Hebrew), pp. 94-100.

2 First Challenges 1946-48

Following the withdrawal of French troops, the remaining Syrian elements of the Armée du Levant were transferred to Lebanon and Syria, each according to the disposition of the troops at the time of the French withdrawal. It was clearly evident to the Syrian government that although the remnants of this force could potentially have become the core of an embryonic air force, they lacked professional experience and equipment. The grave situation upon the French withdrawal was best described by former SAF pilot Captain Mahmud Rifai in the Syrian Army journal al-Jundi:

The foreign forces withdrew from the country on 17 April 1946 leaving behind empty airfields with nothing but devastated buildings. The units that prior to the withdrawal were called 'Special Forces' consisted of various branches such as infantry, armoured corps, engineers, cavalry, and artillery corps; the occupying power excluded Syrians from the [French] air force until the last war [WWII] when they were admitted to flying schools. These men built the air force when the Syrian authorities decided to complement their armed forces with the formation of an air force, which is the principal service in any modern army.⁴¹

When negotiations began between the French Vichy regime and Syrian officials, as early as spring 1944, the elected Syrian prime minister estimated that an initial budget of SyP 35 million (equivalent to approximately £5 million at the 1944 rate of exchange) was required to reorganize the troops and mould them into an army. This was a very realistic estimate compared

⁴¹ 'Appendix to Intelligence Report no. 118', 30 July 1949, IDFA 274-3800137-1951.

with the army's 1948 budget of SyP 40 million, representing nearly 40 per cent of the total Syrian budget for a year in which war was being waged against the newly established state of Israel.⁴²

On 14 June 1945 a national defence ministry was established while French troops were still on Syrian soil, and four months later a special decree was issued stipulating the full integration of Syrians serving in the French army in the incipient Syrian armed forces. A military committee, headed by Col. Abdullah Attfah, devised the structure of a future Syrian air force to include one squadron of aircraft. Born in 1895, Attfah had served as an officer in the Ottoman army gaining experience on the Palestinian front during WWI; yet he lacked any knowledge of the tactical and operational aspects of military aviation. Hence he generally referred to the squadron as a collection of aircraft, failing to even specify whether they should have air-to-air fighting or air-to-ground bombing capabilities. The only defined aspect of this unit in his proposal was its original designation as a 'company' (*seria* in Arabic) similar to the definition used to describe the infantry, artillery or armoured formations of a modern army. Clearly, Attfah failed to grasp the importance of a training element, without which no squadron of operational aircraft could ever materialize, that should have preceded any plan of forming a nucleus of a fighting air unit. His idea, like that of most Syrian non-aviator officers, was that such training could be provided by the Homs military academy, based on French experience, though it was evident that the Syrians would not consider French mercenary pilots in their soon to be established air force.⁴³

⁴² Agra, The Arab Armies in our Times (Tel Aviv: Maarachot, 1948; Hebrew), p. 80.

⁴³ Nafuri, 'al-Jaish al-Suri', pp 2-3. For Attfah's background see Be'eri, Army Officers, p. 62.

Back in 1945 the prospect of war in the Middle East between Arabs and Israelis was not yet apparent and the initial steps taken to form a nucleus of an air force were both logical and prudent despite being contrary to Attfah's initial thoughts. The main priority was the establishment of a flight school and acquisition of ab-initio training aircraft of the simplest and rugged sort that would require only a minimal training period.

The first aircraft were acquired from the US during the second half of 1946, accompanied by a mission of 42 aeronautical experts, some of whom assisted the SAF in assembling the aircraft and test flying them prior to their official handover. These comprised two Piper J-3C-65 Cubs, available in August, and four additional aircraft of the same type completed for operational service in September. The aircraft were purchased directly from the Piper Aircraft Corporation in Lockhaven, Pennsylvania, and were the only aircraft ever to be purchased new from an American manufacturer. In order to conceal their intended use for pilot training, the acquisition was arranged and funded by the newly established Aero Club of Syria with some funds raised through citizens' donations.⁴⁴

The Piper Cub, essentially a simple training aircraft, was widely in use in the US since the prototype made its first flight in 1937. When Washington entered WWII the little Cubs, which had the ability to land and take off from unprepared strips, were attached to the ground forces in Europe, enabling such senior commanders as Eisenhower, Patton and Marshall to tour the battlefields and get first hand picture of the war situation. This aircraft was invaluable in the Pacific theatre as well due to its capability to operate under extreme conditions, requiring only minimal maintenance and care. No fewer than 700 wounded British soldiers were evacuated

⁴⁴ Al-Majala al-Askariya, November 1965, pp 52-54.

from the jungles of Burma in two weeks of constant flying by the Cubs, earning them the nickname 'Grasshoppers' by the troops and pilots of the American Army, but they had the potential to be used principally for military purposes. By attaching a pair of machine guns under the wings, or dropping small diameter bombs from the cockpit open door by its crew, the originally intended communications aircraft was transformed into a fully armed combat aircraft.⁴⁵

Concurrent with the delivery of the Piper Cubs, the SAF acquired from the British aircraft manufacturer Percival a quartet of Proctor V communications aircraft through a private dealer. The Proctor, first flown in 1939, had the potential to be used as a light transport aircraft. The first two aircraft arrived in Damascus only days before the Pipers. The Proctor purchase, the only such acquisition of newly-built British aircraft, was the result of a successful sales tour by the privately owned export company Tradewinds (London) Ltd. This followed a demonstration of the aircraft (in May 1946) in Damascus by two former Royal Air Force (RAF) pilots. The SAF was impressed with the Proctor's ability to operate from unprepared strips and its relative ease of maintenance in the hot and high altitude conditions of Syrian airfields.⁴⁶

By the end of September 1946 the SAF had become the proud owner of six Pipers and four Proctors and a search commenced for basic trainers. By virtue of their varied capabilities, the SAF assigned the Cubs as liaison and medical evacuation aircraft. The Proctors were too heavy and complicated for pilot cadets to double as trainers so a search began for more adept instruction aircraft. During the latter part of 1946 four de-Havilland DH-82A Tiger Moth

⁴⁵ Devon Francis, 'Piper Cub Goes to War', Journal of the American Aviation Historical Society, Spring 1976, pp 72-78.

⁴⁶ Flight International Magazine, 23 May 1946, p. 526.

primary trainers were bought on the British second-hand civilian market. They were shipped to Syria, arriving in October and November of that year.

The SAF was officially established on 16 October 1946 when President Hashem Atassi signed a decree to that effect.⁴⁷ Now that a respectable, though small, number of training aircraft was available, the SAF could embark on the process of training a nucleus of pilot candidates. Initially these were given ‘familiarization flights’ on the Fairchild Argus aircraft to evaluate their ability to adapt to the physical requirements of the various phases of flight. Since the Argus was withdrawn as a basic aircraft due to the increasing transport and communications needs of the SAF trainer, from late 1947 onwards the syllabus consisted of several flying hours on the Tiger-Moth and Piper Cub with those cadets deemed suitable for progressing to the larger Fairchild Argus. This was the nearest thing to a Harvard, being the heaviest light plane in the SAF’s inventory. Because of delays in the assembly of the Tiger Moths, initial training was done on the Pipers but as soon as the Tiger Moths were readied, the core flight training was carried out exclusively on them, with the Pipers relegated to the communications and liaison work.

In November 1947 the first flying course took place at Damascus-Mezze consisting of twenty cadets. Parallel to the flying course the SAF trained twenty supporting operations staff including mechanics, radio operators and meteorological observers. The instructors represented a wide range of training experience: from the combat-proven British, German and Croatian pilots, all of whom had hundreds of flying hours accumulated during the difficult conditions of the Second World War, to Egyptian and Iraqi pilots who gained their wings in the mid 1930s but had very restricted, if any combat experience. During the large manoeuvres that month, all cadets

⁴⁷ Tom Cooper & David Nicolle, Arab MiGs (Houston: Harpia Publishing, 2009), vol. 1, p. 29.

gained their first glimpse of air-to-ground combat coordination with the army, albeit from the back seats of the Harvards which were flown by their instructors. The graduating pilots, who completed the course and attained solo flying status on the Harvards, were only assigned to No.1 squadron as operational pilots in February 1948. Interestingly enough, the SAF did not train any air gunners as such, this role being taken over during the forthcoming operations over Palestine by cadets who graduated from the radio-operators course.⁴⁸

From the start not all of the new pilots were proficient on the Harvard. The relatively short period from February to mid-May, available for transition from the light training aircraft to the comparatively heavy and armed Harvard, meant that those pilots who had the ability to solo on the Harvard possessed suitable flying abilities but did not necessarily accumulate any combat experience. It was one thing to be able to fly the aircraft but it took a different skill to carry out offensive operations in a complex battlefield. Having established the fighter squadron the government catered for the transportation needs by setting up Syrian Airways as the national airline with two Douglas DC-3 aircraft. Despite the potential of converting the DC-3 into a makeshift medium bomber, as the IAF did during the 1948 war, the SAF high command did not realize this option. However, the general possibility of using the aircraft for bombing was discussed in late 1947 when it was decided to place the Syrian Airways fleet at the disposal of the military.⁴⁹ It would have been wise to consider such an option not only because this would have widened the operational spectrum given the restricted capabilities of the smaller Harvards,

⁴⁸ 'Appendix to Intelligence Report no. 118', 30 July 1949, IDFA 274-3800137-1951.

⁴⁹ 'The Syrian Army's Air Force, Intelligence Report 154', January 1951, p. 4, IAF Air Historical Branch Archives, file SH/67.

but also because the Avro Ansons acquired at a later stage had a shorter range and could carry a much lighter payload.

In March 1947 the Syrian government, well aware of the restricted capabilities of in-house training, asked for US consent to train 100 Syrians as pilots. In November of that year, however, the Syrian army began to move troops towards the border with mandatory Palestine in anticipation of a United Nations resolution on the partition of Palestine into a Jewish and Arab state. Unwilling to take sides in the looming confrontation, the US Congress blocked the request.⁵⁰ Simultaneously with the pilot training request, the SAF bought twenty North-American AT-6 Harvard advanced trainers totalling \$650,000. These planes, together with six Fairchild UC-61 Argus light transport and communications aircraft, were made surplus to US Air Force requirements after the end of WWII and were offered for sale having no military value as such.⁵¹

The sale to the SAF was handled by two different US agencies. While the Argus were stored in Europe with the sale finalized through the Office of the Foreign Liquidation Commissioner (OFLC), the Harvards were sold via the War Assets Administration (WAA). Both organizations were part of the US State Department since selling war surplus arms was considered a politically delicate matter. Upon arrival of the Harvards it transpired that three aircraft were too corroded to be made airworthy, hence they were declared suitable for use as spare parts only. This was because the Syrians failed to ensure that the aircraft, while stored externally on the ship's deck during the long voyage, were cocooned so as to keep them dry from

⁵⁰ Noam Hartoch, The Galilee Squadron during the War of Independence (Rishon Lezion: Israel Air Force Association, 1999; Hebrew), p. 32.

⁵¹ 'Aircraft Acquisition for Syria and Lebanon', undated, IDFA 175-600137-1951.

the corrosive effects of the salty sea air.⁵² Furthermore, contrary to the agreement with the WAA the aircraft arrived with their cannons removed and with no suitable ammunition. Although this was standard practice with the WAA, under an understanding that the aircraft would not be used for military purposes, the SAF was caught by surprise and had to improvise with the help of its foreign advisers and mechanics to make them combat ready. In addition to installing two ex-French Hotchkiss cannons capable of firing 1200 rounds per minute, the aircraft were fitted with under-wing racks for the carriage of two 50kg or four 25kg bombs.⁵³

With the aid of British and German experts a unique modification was carried out on the Harvards to enhance their combat capabilities. By removing the aft part of the canopy and installing the machine gun facing rearwards the instructor's seat was repositioned so as to enable a rear gunner to be placed opposite the pilot's seat (back-to-back) and operate the machine gun by rotating it to either sides of the tail. Though a somewhat unorthodox arrangement and having no small potential for disaster (if the gunner accidentally shot off his own aircraft's tail), this proved to be a very successful modification and extremely useful during the opening phases of the war in Palestine.⁵⁴

With the decision taken to use the Harvards as light bombers a reinforcement of the small training aircraft fleet was required towards the build-up of sufficient air crews. In its search for available aircraft in an international climate of reluctance to sell arms to Middle Eastern countries the SAF located two Tiger Moth training aircraft in South Africa where they were

⁵² 'Report on the Strength of Enemy Air Forces', 23 July 1948, IDFA 683-600137-1951

⁵³ 'The Syrian Air Force', June 1949 (a Hebrew translation in IDFA 51-782-1965). See also: records of the OFLC & WAA nos. RG59 & RG353, US National Archives, Washington DC

⁵⁴ 'Air Forces of the Enemy, Intelligence Section Report', Northern Command to the Director of Intelligence, MD/49/156, 15 February 1949, IDFA 6-137-827-1951

offered by their civilian owners to the highest bidder without asking too many questions about the aircraft's final user. By July 1947 the two aircraft had reached Syria and a few months later the SAF could boast a fleet of nearly forty aircraft, albeit restricted to close air support and ground attack missions and having no dedicated aircraft for air-to-air combat or interception of intruders.

Initial organization

The air force was organized along the lines of the French Armée de l'Air, its headquarters comprising four divisions, administration (Division 'A'), intelligence (Division 'B'), operations and training (Division 'C') and general services (Division 'D'). The two operational bases, at Damascus-Mezze, where the aircraft of Nos. 1 (Harvard), 2 (Proctor, Argus and Piper Cub) and 3 (Anson and Dakota) squadrons were based, and at Hama were under the command of officers holding the rank of major and reporting to division commander, while a third airfield, at Deir-e-Zor, was kept operational as a rear reserve base without having active aircraft based. Major aircraft maintenance (levels 'C' and 'D') was undertaken at the main depot facility of Homs, whereas daily checks and minor repairs were done at squadron level.⁵⁵

The air force was headed by Col. Abdel Wahab Hakim, who was not an airman and who was succeeded after a few months by Col. Salah al-Din Hankan. The fifty-year-old Hankan had no experience in air force matters either. A graduate of the Istanbul military academy during the Ottoman era, he served as chief of the coastal guard prior to his appointment as SAF commander-in-chief. Taking flying lessons under a British instructor upon his appointment,

⁵⁵ 'Syrian Air Force Organization', January 1949, IDFA 27-895-1952

Hankan was instrumental in building up the SAF by acquiring the Harvards and preparing these for the looming war in Palestine.⁵⁶

The final acquisition was completed in early July 1948 in the form of an undisclosed number of Avro Anson light transport and communications aircraft. The origins of the aircraft cannot be positively confirmed but it was unlikely to have come directly from British sources since no direct sale to Syria had ever been recorded and any potential deals would have been blocked by the British government's embargo on arms supplies during the 1948 war. There was strong evidence that the Ansons were loaned to the SAF by Iraq and that at least some missions were actually flown by Iraqi Air Force (IrAF) crews, though Egypt, which also had a substantial number of Ansons in service, was mentioned as a possible source. When on 18 July 1948 two Ansons bombed the Ramat David air base, southeast of Haifa, one was hit by anti-aircraft fire and made an emergency landing near Afula, probably at the former RAF airstrip there which had been paved as early as 1918, but was not used by the Israelis during the war. The pilot was captured and brought for interrogation to Ramat David, where his flying wings badge was taken from him and shown to an IAF pilot who immediately identified them as IrAF aircrew wings. If this was indeed the case, it was almost certain that IrAF pilots were flying the SAF Ansons given that the aircraft were supplied shortly before going into action, which left too little time for training Syrian pilots. Another possibility was that the aircraft were on loan from the IrAf detachment in Mafrak (Transjordan).⁵⁷

⁵⁶ 'Report on the Syrian Air Force', 12 June 1949, IAF Air Historical Branch Archives, file SH 203/171, vol. AI-9, p. 28.

⁵⁷ Cohen, History of the Israel Air Force during the War of Independence (Tel Aviv: Ministry of Defence Publishing House, 1998; Hebrew), vol. 1, p. 668.

The two aircraft were used during the Palestine war for bombing missions from mid-July 1948, armed with a couple of 0.303 inch machine guns fitted in upper turrets and an external payload of up to 1100kgs of bombs attached on racks under the wings.⁵⁸ A report on the SAF, dated June 1949, gave the number of Ansons in service as two. The question of their origins as well as the exact date of entry to service had not been positively determined. Nevertheless, it is reasonable to assume that a Syrian request for the heavy aircraft was filed with Iraq to overcome the Harvard's restricted capabilities. This was particularly significant after the initial invasion of Palestine in mid-May 1948 and subsequent offensive operations as the Harvards failed to provide the necessary air support to change the balance on the battlefield.

Mercenaries and advisors - overcoming aerial warfare inexperience

On the eve of the 1948 war the SAF comprised a handful of partially adequate aircraft and a nucleus of mostly inexperienced pilots yet was tasked with the crucial role of supporting the army's invasion of the Galilee region. Unlike its allied air forces, the Egyptian and the Iraqi, formed in 1932 and 1936 respectively, the SAF high command understood that if it were to have any chance of winning in the forthcoming conflict it should make the best use of whatever was available.

As discussed in the opening chapter, no SAF pilot served in any foreign air force upon the force's establishment. The main priorities thus became the formation of a nucleus of aircrew (pilots, navigators, and bomb throwers, also called 'chuckers') who could operate the Harvard

⁵⁸ 'Report on the Syrian Air Force', 20 February 1949, IDFA 6-137-827-1951. See also Ray Sturtivant, The Anson File (London: Air Britain Historians, 1988), p. 284; an IDF June 1949 report: IDFA 1/7011/1949

aircraft skilfully enough to be able to support the Syrian ground forces and inflict the greatest possible damage on the IDF so as to prevent it from counterattacking and advancing towards Damascus. Although the pre-war manoeuvres clearly demonstrated the Syrian Army's strategic intent of using its sparse air arm to defend the capital, the SAF soon realized that without dedicated fighter planes this could not be achieved. The professionalism and experience required of fighter pilots far exceeded those required for close support or attack mission pilots. The latter, being the mission planned by the SAF high command for the Harvards, demonstrated a very realistic attitude towards the lack of suitable aircraft on one hand, and the sparse manpower to operate the existing aircraft, on the other. With that reality in mind the SAF strove to form a nucleus of trained Syrian pilots assisted by foreign mercenaries. The preferred method of crewing was for the foreigners to serve as pilots-in-command on the multi-crew Ansons and as pilots in the two-seater Harvards, retaining the role of bomb 'chuckers' to the indigenous Syrians themselves.

Following the two pilot courses completed before the war the SAF high command was aware that while some of the Syrian graduates were of acceptable level not all were. If those few competent Syrian pilots would have been lost in the war - shot down, killed, captured, or incapacitated for any other reason - this would have placed the SAF in a dire situation. In such circumstances, an immediate solution would have been essential. The only comparable case was that of the IAF. Having had only a handful of civilian aircraft, mainly single engine light planes and pilots who graduated from civilian flying schools and flying clubs in the decade preceding the war, this amateurish corps of pilots was even less effective than its Syrian counterpart. However, the IAF had the exceptional advantage of having at its disposal scores of Jewish pilots

who had learnt to fly with foreign air forces, gained considerable experience during the Second World War, and were readily available, either as MAHAL⁵⁹ or GAHAL⁶⁰ recruits.

According to one source, more than 1,500 MAHAL air and ground crews of US origin served in the IAF. The dominant role of foreign recruits in the IAF is vividly illustrated by the composition of its three most important elements in the latter half of 1948: the ATC, which operated heavy transport aircraft carrying ammunition and spares from overseas bases, as well as bombing missions on Arab capitals, had seventy-four air crew members, only three of whom were Israelis. The strategic B-17 Flying Fortress squadron had four Israelis out of forty-one crew members, while the lone fighter squadron had two Israeli pilots out of twenty pilots in service.⁶¹ It must be noted in this respect that none of the Arab air forces were as reliant on foreign help as the SAF and all the more so the IAF. This could be a possible explanation of the IAF's relative success, particularly during the second half of the war and the subsequent gradual decline of the Egyptian, Iraqi and Syrian air elements that participated in the 1948 war.

At the end of the Second World War Syria was grateful to Britain for helping expel the remnants of the Vichy forces and backing the formation of an independent Syrian state. Viewing this as an opportunity to add Damascus to the declining number of Middle Eastern allies, London offered Syria military assistance by sending Jordanian (the Jordanian army was commanded and

⁵⁹ MAHAL, acronym for the Hebrew Mitnadvei Hutz La'aretz (foreign volunteers), were mostly foreign Jewish nationals who had served in their respective countries' armed forces and, by virtue of the desire to help the nascent state of Israel, joined the IDF for ideological, national, or religious sentiments.

⁶⁰ GAHAL, acronym for the Hebrew Giyus Hutz La'aretz (foreign recruits), were not necessarily of Jewish origin and were mostly hired by the IDF/IAF as paid (sometimes highly paid) mercenaries, having little or no sentiments other than considering their fighting for Israel a well paid job.

⁶¹ Shahan, Wings of Victory, (Tel Aviv, 1966; Hebrew), p. 295. See also: Kaplansky, The First Fliers, pp. 52-57.

led by British officers) and British instructors - the former to train infantry and artillery units, the latter, amongst others, to train Syrians in the art of flying. This was welcomed by Damascus since, as we have seen, the US declined its request for training a hundred flying cadets while there were no pilots to fly the Harvards and light planes.⁶² Therefore, the British offer was gladly accepted and Col. Fox, a retired army officer, was appointed chief military adviser to the Syrian army.

Fox recruited four former RAF pilots, and on the basis of their recommendations the British government approved the sale of the first de-Havilland Tiger Moth primary trainer aircraft and the more advanced Percival Proctor to form a nucleus of a flying school. However, the SAF soon realized that the British syllabus of flight training was cumbersome and sluggish, suspecting political motivation aimed at slowing down its ability to acquire combat ready air arm in a short time. When Fox suggested that it would take up to three years to form the first combat aircraft squadrons he was accused by senior Syrian officers of allowing four times as long to train Syrian pilots compared with the average standard in Europe. Fox did not respond, possibly on Whitehall's instruction to avoid open confrontation on the subject, but the Syrian suspicion that the British advisors deliberately slowed down the army's development was not wholly unwarranted as evidenced, inter alia, by Fox's mid-1947 suggestion to Attfah, now Chief-of-Staff of the Syrian armed forces, not to acquire heavy armour and artillery and make do with mortars and armoured cars, at a time when it was evident that the Syrian army would be part of the pan-Arab invasion of the prospective Jewish state, should it be established.

⁶² US National Archives, file RG59, document no. 867.248/8-847.

It was also Fox's learned opinion that at its inception the SAF would not require any combat aircraft, opposing the acquisition of the Harvard aircraft on the ground that the SAF should keep itself to supporting ground forces, something that could be achieved with its existing light planes without the introduction of more effective attack aircraft. Fox's ideas were rejected by some of the more influential Syrian officers and he was finally released from his advisory duties by the end of 1947.⁶³

Apart from the small British group of pilots the SAF turned to other sources to recruit mercenaries. Readily available were former Axis pilots with considerable war experience. A Syrian official by the name of Tabqa was sent to southern Europe in October 1947 to recruit German, Italian and Croatian pilots, who were looking for both shelter and work, and were prepared to go to Syria. Tabqa had served during the war as a storm platoon commander in the Wehrmacht's 41st Brigade operating in southern Europe. This, together with his command of the German language, made him familiar with the land and the people. Yet he had relatively little success in his first mission. He failed to recruit German or Italian pilots but had some success in persuading five Croatians, including a notable flying ace of WWII fame, Captain Mato Dukovac, to accompany him to Damascus and join the SAF.

Having completed his flying training with the Croatian Air Force shortly before the outbreak of WWII, during which he excelled as a fighter pilot in the Nazi service claiming to have shot down forty-four allied aircraft, Dukovac fled to Italy in August 1946 seeking asylum, where he was recruited by Tabqa. He introduced his Syrian interlocutor to three other pilots, one

⁶³ 'The Syrian Army & Air Force', Intelligence Report no. 154, 1950, IAF Air Historical Branch Archives, file SH 67

of whom had won the Iron Cross First Class for service on the Russian front, as well as a wireless operator.

Upon arriving in Damascus in the autumn of 1947, the five were given Syrian passports and drafted to the SAF. The four pilots flew Harvards with the No. 1 squadron and participated as instructors in the training programme initiated by the end of that year. The wireless operator was initially attached to the military academy as an instructor, and during the 1948 war flew combat missions on the Avro Ansons, possibly not only as a wireless operator but as a navigator or bomb 'chucker'. Although generally refraining from carrying out missions over the battlefield, so as to avoid capture and possible extradition to the allied forces, Dukovac carried out a bombing mission in Harvard no.+207 on 14 July 1948 against Israeli targets in the Galilee.⁶⁴ Dukovac and another fellow Croatian left the SAF before the end of the war, emigrating to Canada and Venezuela respectively. The fate of the other three Croatians remains unknown.⁶⁵

The Croatian and British pilots were joined by a number of Luftwaffe pilots. The first to be recruited was a pilot named Seiffert who served in the Luftwaffe's expeditionary air element in Syria during the Vichy period and was captured by the British. When released, Seiffert was approached by the SAF and agreed to serve as a Harvard pilot and instructor. By August 1948, some thirty Germans had joined the Syrian Army including three pilots who flew Harvards and the Dakotas of the civilian company Syrian Airways. One of them was Major Kiel, a veteran Luftwaffe pilot with thousands of flying hours to his credit.⁶⁶ Like the two Croatians, Seiffert and Kiel left the SAF before the end of the war. Seiffert moved to Egypt where he offered his

⁶⁴ Faisal Natzif's personal diary, IDFA 3-5942-1949

⁶⁵ 'Development of Enemy Air Forces', 25 August 1949, IDFA 689-535-2004

⁶⁶ 'Daily Intelligence Report No. 88', 7 March 1949, IDFA 671-535-2004

services as a pilot, married a local woman and stayed there for several years. Kiel's fate remains unknown.

At the end of December 1948 a large group of former German army veterans arrived in Lebanon on board an Egyptian vessel. According to intelligence reports this group numbered approximately 2,500 though this figure was suspected to be exaggerated. Registration records found at the Italian locality of Frascati cited the travel of 2,500 Germans to various Middle Eastern countries (notably Lebanon, Egypt and Syria). Allegedly the group was headed by a former General Von Lochmeier, who had served on the Luftwaffe's commander-in-chief Erich Milch's staff during WWII.⁶⁷ It was confirmed that he brought twenty-five experienced experts in artillery, armour and air warfare to Syria. Von Lochmeier was tasked with the reorganization of the SAF, and for that mission he appointed an experienced Luftwaffe pilot by the name of Mueller. This group was recruited in the US occupation zone of Europe (Germany/Austria) by a Switzerland-based Syrian official by the name of Charles Gamassi. Having handpicked the group members, Gamassi hired vehicles that took them to refugee camps in Frascati and the Littarian Islands. He set up an office at the refugee camps where the recruits were registered, provided with Syrian passports, uniforms, and an initial grant of £200. They then boarded small vessels hired with the help of German priests who were assisted by the Vatican, and sailed for Beirut.

Gamassi was particularly interested in recruiting airmen, and those who could prove their expertise as pilots or navigators were granted an extra payment of £120 if going to Syria or £110 if destined for Lebanon. According to intelligence reports Gamassi's operation was well known

⁶⁷ Despite intense research effort by the author, no Luftwaffe General by that name has been identified. The fact that contemporary intelligence reports hailed him as a famous officer, aide-de-camp to the Luftwaffe Commander-in-Chief during WWII Field Marshall Erhard Milch, as well as a notable fighter pilot, only adds to the mystery.

to the Italian authorities and was carried out with their tacit consent. The group of 25 officers headed by Von Lochmeier was quickly joined by a paratrooper battalion of 150 experienced soldiers and four officers.⁶⁸ Towards the end of the war the importance of the British, Croatian and German mercenaries declined. As the SAF established its own air force academy and restructured its flight training syllabus it was felt that the presence of foreign pilots had become superfluous. Though admitting their overwhelming importance during the critical first three months of the war, the SAF was facing problems with the foreign advisors whose relations with the native Syrians deteriorated rapidly, leading to frequent quarrels and skirmishes.

SAF pilot Faisal Natzif recorded in his diary on 7 July 1948, a day before being killed in action: 'Had a quarrel with Yugoslav pilot Mato [Dukovac]'. Despite being Dukovac's trainee and holding him in high esteem as one of the few foreign mercenaries carrying out regular sorties over Israel, Dukovac was known to have criticized the Syrian pilots for their low professional abilities leading to frequent arguments between them.⁶⁹ In addition, the presence of 'foreigners' within the rather secluded Syrian society, reeling from the throes of European colonial rule, fuelled suspicion towards them as potential fifth columnists. To this must be added the deteriorating Syrian economy, which left its mark on the foreign advisors and mercenaries whose salaries and living conditions worsened as the war drew to a close. It should be noted, though, that payment was in Syrian pounds and that the authorities refrained in most cases from paying salaries in foreign currency which was scarce.

By early 1949 the average monthly salary of the British pilots was SyP 1200, similar to that of Syrian pilots. The foreigners felt that their remuneration should be substantially enhanced

⁶⁸ 'Daath Report', Intelligence Branch No. 1, 20 January 1949, IDFA 10-1261-1949

⁶⁹ 'Faisal Natzif's Diary', IDFA 3-5942-1949

as their level of seniority was higher than that of their Syrian colleagues, but the government refused to a differential salary scale resulting in constant arguments, exacerbated by the relatively low Syrian Pound rate of exchange.⁷⁰

The Syrians also felt that the presence of foreign pilots failed to bring about the much hoped victory, noting the foreigners' fear of capture by Israel or getting killed as a reason for not extending their services. This concern was particularly felt among the Germans and the Croatians who feared that in the event of imprisonment, they would be tried as Nazi collaborators rather than treated as normal prisoners of war. Compared with the sterling service provided by MAHAL and GACHAL volunteers in the IAF, one cannot evade the stark contrast of the two cases, making the Syrian disappointment quite understandable. It seems that it was difficult to bridge the gap between mercenaries, who lacked the ideological incentive and sold their services to the highest bidder, coupled with their lack of enthusiasm to risk their lives beyond a certain point, and the willingness of Jewish volunteers to aid their people in great need.

The reluctance to fly combat missions was not limited to the Germans and the Croatians pilots but also applied to the British pilots, where only one of the four is known to have participated in offensive operations over Palestine. It should be noted, however, that had the SAF operated without its foreign mercenaries at the beginning of the war it would have never been able to achieve its relative successes. Their most important contribution was not confined to operating against Israeli ground forces but their combat spirit and fighting enthusiasm combined with their rich operational experience to enable the small SAF to carry out more than 400 missions in a relatively short time frame. By mid-1949 the majority of foreign pilots had

⁷⁰ IAF intelligence reports, nos. 111 (9 June 1949) & 119 (5 July 1949) & 124 (9 September 1949), IDFA 671-535-2004

departed, including six Germans, leaving only a few mercenaries behind. Two of the veteran British instructors had their contracts expired by March and June 1949 respectively, almost a year-and-a-half after they were signed. Finally, the end of the Palestine war and the signing of the Rhodes armistice agreements enabled the SAF to send trainees abroad thus reducing the importance of foreign instructors on Syrian soil.⁷¹

Preparing for war

In October-November 1947 the Syrian Army conducted for the first time wide scale manoeuvres near the Syria-Palestine border. The October exercise was first and foremost a demonstrative 'tour de force' intended for domestic political purposes. Operationally its main objective was to train the units in moving away from their permanent bases towards the Palestine border, where the Syrian army was expected to engage the enemy in a future conflict. Since the only combat element of the SAF, namely the Harvard aircraft, were still being assembled, it was decided by the army's high command to concentrate on training the ground forces only. The overall force commander was Lt. Col. Hussni Zaim, Syria's future dictator, and the reserve force was placed under the command of Lt. Col. Rif'at Hakan (unrelated to Salah Hakan, the air force commander).

The 14-17 November manoeuvre was far more ambitious, involving two rival forces arrayed against each other with the 'red' force, dubbed 'the southern army', simulating an attack on the 'blue' force known as 'the northern army'. The last day of the manoeuvre was attended, among other dignitaries, by the Syrian president and a string of foreign guests. These included

⁷¹ Syrian Air Force Order no. 120, (22 January 1949) & no. 222, (6 February 1949), IDFA 322-600137-1951

five senior Lebanese officers, headed by Lt.Col. Salem, the army's chief-of-staff; the Iraqi Minister of Defence, Lt. Gen. Taha Hashemi; and more importantly Maj. Gen. Ismail Safwat, the Iraqi deputy chief of staff who would later command the pan-Arab military forces in the Palestine campaigns. Also attending were Arab League Secretary-General Abdel Rahman Azzam and Fairuz Khan, special emissary of Pakistan to the Middle East.

The southern forces, under the command of former SAF commander Lt.Col. Abdel Wahab Hakim, were dispersed in the area from Dar'a to south of Quneitra, both on the Golan Heights, and included for the first time a full division composed of two brigades. It was given aerial support in the form of a squadron of light planes that included the entire complement of the SAF's light communications fleet at that time, six Piper Cubs, six Argus and four Proctors.

The 'northern army' was also grouped into a single division comprising the same composition of forces. However, they were supported by heavier artillery, including a newly delivered 120mm battery, and had at their disposal the Harvard squadron. The northern army was based in Damascus and Qatana, and its commander was Maj. Gamil Barhani. Contrary to what could have been expected, neither army had independent command over the aircraft at its disposal. In order to operate them, a request had to be presented to SAF commander Hankan. This was a grave operational error as it involved a lengthy 'negotiations' process that prevented army commanders from fully utilizing the aircraft for much needed air support against the 'enemy'. This was typical of the SAF, run at the time along French doctrinal lines preferring the rigid subordination of squadrons to central air force command rather than giving them a free hand to operate the aircraft according to the changing battlefield requirements.

On 16 November the southern army was ordered to advance northwards along both the Quneitra-Damascus and the Dar'a-Damascus roads. The aim was to capture the line connecting east with west, from Sheikh Maskin to Quneitra, which included some strategically important road junctions and a second east-west line from Massmiya, a railway station to Beit-Timah. Having attained this goal, the forces were to advance further north so as to have full control over the heights surrounding the town of Kissweh, an important position overlooking the southern approaches to Damascus. This, incidentally, was the exact route taken by the British forces invading Syria in 1941 to overthrow the Vichy regime. The speed and thrust of the southern army was to be centred on the single tank battalion. Syria's French-supplied Renault tanks were capable of reaching a maximum speed of seventeen kilometres per hour and were armed with a 37mm cannon and a 7.5mm machine gun immediately below the turret.⁷²

The exact tactical function of the fifteen odd tanks advancing forward without effective air cover was unclear, as the assortment of light planes certainly could not have been used for that purpose. Contrary to the operation of modified light planes by the IAF during the 1948 war, the Syrian fleet was unarmed and could thus be useful only for purposes of forward observation and medical evacuation.

In the opinion of this author, it was the second tactical mistake the Syrian planners did. If the SAF was to encounter effectively the 'enemy's' assault on its capital, the Harvards should have been attached to the attacking southern army instead of defending the northern one, given that they were not fit for air-to-air combat but were rather useful as close support light bombers. If attached to the southern army the SAF's anti-aircraft system could have had its first

⁷² 'The Syrian Army', 12 August 1948, IDFA 28-1261-1949

opportunity at planning the defence of the capital against air strikes, a role it would fail during the summer of 1948. It was the manoeuvre planners' idea, however, to attempt stopping the advance of the southern army on Damascus by strafing and bombing the advancing columns. What they failed to take into account was the anti-aircraft fire the Harvards were likely to encounter from the armoured cars of the southern army, which had anti-aircraft machine guns installed on them. Were the Harvards to fail to stop the columns there would be no fallback option.

A wiser approach would have been to split the Harvard squadron into two flights of eight or so aircraft and attach the force evenly to both armies. The same logic could have been utilized with regard to the light planes. It is difficult to understand the rationale behind placing the entire supporting force on the side of the northern army rather than split the aircraft between the armies. If this approach was employed, the SAF could have realized already at that early stage the problematic technical state of its aircraft, which was to result in no more than four aircraft formation attacks at a time during the 1948 war (representing only an approximate quarter of the available order of battle). This might be an indication of the lack of air experience and expertise of the SAF's C.in C. There is no known evidence of any dispute between Hankan and his British adviser Fox, but considering this illogical situation, one might guess that either Fox was not involved in the planning or had a disagreement with Hankan as to how the SAF should carry out its tasks in this exceedingly important exercise prior to the outbreak of hostilities.

To enable spectators to differentiate between the two 'armies' the southern force's aircraft were painted in striking yellow colours while the Harvards of the northern army retained their camouflaged colours. In most air forces around the world, ground attack aircraft are

camouflaged in a way that allows them to blend with the ground's brown/green shades, while air superiority fighters are painted in bright colours, silver or light blue/brown, so as to remain inconspicuous and fully integrate with the background of cloudy silver skies such as those of a typical Syrian winter. The use of yellow paint may suggest a desire to display the offensive aircraft in a colour matching as close as possible the ground colours of the Syrian (Golan) heights, but then again, these are rather dark brown and very different from what was actually painted. Also highly questionable was the use of unarmed light planes by the offensive force while the defending army used offensive aircraft; but in the general context of the many problems exposed by the manoeuvre, this must have been deemed of lesser importance.

By the time the manoeuvres took place, discussions were already held in Arab capitals on the need to destroy the prospective state of Israel. Lacking intelligence on the Jewish operational plans, Syrian strategists had also to deal with a potential threat from Transjordan, whose relations with Damascus were somewhat strained. Either that or an Israeli assault from the west or southwest, possibly through Transjordan's territory, with or without the latter's consent, might have been a viable option. This was reflected in the manoeuvre's scenario of attacking columns advancing on Damascus from a south-westerly direction. It is interesting to note that while the army had an inherent responsibility for defending the entire country from the threat of invasion, the Syrian leadership seemed overwhelmingly preoccupied with the defence of the capital rather than the country as a whole. This in turn indicated a highly dogmatic strategic concept of defence against Israeli and/or Transjordanian forces, leaving the long borderlines with Turkey and Iraq almost defenceless.

This, to be sure, was no merely hypothetical possibility. The Syrians were wary of Hashemite-ruled Iraq ever since King Faisal, who briefly ruled Syria in 1920, expressed the desire for the unification of the Fertile Crescent under his leadership, a policy sustained by his chieftain and long time Iraqi Prime Minister Nuri Said, who did not fail to express his disappointment with Damascus's rejection of this unity scheme and its association with Egypt and Saudi Arabia - Iraq's perennial rivals. The SAF, being small and restricted in combat assets, certainly had no means to spread thin its resources against potential threats from Iraq (or Turkey, whose relations with Syria were delicate to say the least). The Iraqi air force at the time was equipped with the finest Western aircraft and had experienced pilots at its disposal. Syria's leaders were also aware of Transjordan's King Abdullah's aspiration to create a 'Greater Syria' comprising Transjordan, Syria, Palestine, Lebanon, and Iraq under his rule.

The political conflict with Turkey over the disputed region of Alexandretta, which since the 1936 Franco-Syrian Treaty of Alliance placed the region under Syrian sovereignty led to much frustration from the Turks.⁷³ Syria's military planners interpreted the oncoming conflict in Palestine as a direct threat to Syria, justifying the concentration of its small army along those borders rather than dispersing it in such a way as to confront possible invasion from the other three countries. One possibility of course was that Syria downplayed the threat of a military confrontation with Transjordan and Iraq since these countries were part of the pan-Arab coalition it intended to join in invading Palestine and did not believe the hostile Turkish sentiments were strong enough to trigger an open conflagration.

⁷³ Avedis K Sanjuan., 'The Sanjak of Alexandretta, its impact on Turkish-Syrian Relations 1939-1945', in, *Middle-East Journal*, Autumn 1956, p. 379.

From a purely strategic perspective, however, it seemed that French military tradition played a major role in the planning of the November manoeuvres. This was demonstrated by the concept of a head-on clash between offensive and defensive forces without the employment of outflanking tactics, typical of the French method of organizing a first-line attack before attempting to break into the opponent's second line of defence. Having said that, the manoeuvres were highly important as they were the first and only attempt at evaluating the embryonic army's ability to operate on the battlefield and conduct combined operations of infantry, armour and air force against an unknown enemy. It must also be borne in mind that the manoeuvres had also a wider political purpose, namely to underscore Syria's recently won independence and sovereign stance in a changing Middle East, hence the attendance of foreign dignitaries and the widespread media coverage.

In fact, when hostilities broke out in May 1948 the Syrian army faced a completely different scenario as the IDF had no plans of marching on Damascus but rather concentrated its meagre resources on containing the pan-Arab invasion of Israeli territory. For the SAF this meant consolidating its main combat role of providing close support to the ground forces and attacking enemy targets given its lack of dedicated combat aircraft for air superiority role.⁷⁴

The SAF's order of battle

Slightly more than a quarter of the 175 air force personnel were pilots, estimated between forty and fifty. This comprised graduates of two flying courses completed by early 1948 and 10-12 foreign mercenaries. It was estimated that 33-35 combat pilots were on strength when the

⁷⁴ 'Report on Syrian army manoeuvres near the border with Palestine', August 1949, IDFA 70-600137-1951

1948 started, with another 10-12 standing by to crew the light planes and Dakotas in the secondary role of liaison, communication and transport. Since it was highly probable that the two Ansons were seconded from the IrAF, it was almost certain that their pilots were Iraqis or Germans (who were proficient on multi-engine aircraft) but certainly not Syrians.

In order to facilitate operational control, the twelve Harvard light bombers deemed operational (out of seventeen available) were divided into two squadrons, nos. 1 & 2, each with six pilots plus rear gunners. While the practice worldwide was to group 12-24 aircraft in each squadron and strive to have at least two or three pilots for each aircraft, this was clearly impractical for the SAF due to the small number of aircraft and aircrews available.

The Third Squadron, the largest unit, with some twenty aircraft on nominal strength, was practically of lesser operational significance as the light planes were not used at all; neither were the Dakotas. Only the pair of Ansons was intended to be used in combat. Thus, in effect the third squadron was split into two with the Ansons operating as a flight rather than a squadron, having seven pilots at its disposal. This meant slightly more than two full crews, enough to man both aircraft simultaneously though this was done only a few times, possibly due to either aircrew shortage or aircraft maintenance problems.

Also available to the SAF were three Douglas C-47 Dakota transport aircraft, acquired from Pan American Airways in 1947 for the use of Syrian Airways, the national carrier. These were integrated into the SAF ahead of the Palestine war, but initial plans to convert them to bombers were abandoned, most probably due to technical and operational difficulties.

Throughout the war the SAF did not use the Dakotas for offensive operations though they were nominally part of the third squadron that also operated the wide assortment of light planes.⁷⁵

Table 1 SAF's Order of Battle, May 1948

Aircraft Type	Role	Total Number	Operational Aircraft	Squadron Number
North American AT-6 Harvard	Close support	17	12	1 & 2
Avro A-652 Anson	Light bomber *	2	2	3
Douglas C-47 Dakota	Transport **	3	3	3
Percival Proctor Mk. V	Communication	4	4	3
Fairchild F-24R Argus	Communication & Advanced Training	5	5	3
Piper J-3C-65 Cub	Communication & Basic Training	6	6	3
de-Havilland DH-82 Tiger-Moth	Basic Training	6	6	FS (***)
Total		43	38	

* Originally intended for navigational training, believed to have been supplied by Iraq after the campaigns have started.

** Owned by Syrian Airways, impressed into SAF service for the war period but not used in combat.

*** Attached to the flying school.

⁷⁵ 'The Army and Air Force of Syria', April 1949, pp. 3-25, IDFA 311-600137-1951.

Table 2 Known Syrian Air Force airmen (of Syrian nationality) during the 1948 war

Rank & Name	Unit	Remarks
Sgt. Muhi ad-Din Attasi	No. 1 Squadron	Harvard Rear-Gunner, killed 10 July 1948
Lt. Mamduh Az'ma	No. 3 Squadron	C-47/Anson Pilot. Squadron commander
Sgt. 1 st Class Jazeeri	No. 1 Squadron	Harvard Pilot or Rear-Gunner
Sgt. 1 st Class Ghaleb Farughi	No. 1 Squadron	Harvard Pilot or Rear-Gunner
Lt. Gheylani	No. 3 Squadron	C-47/Anson Pilot
Lt. Kemal	No. 3 Squadron	C-47/Anson Pilot
2nd.Lt. Khaidar	No. 2 Squadron	Harvard Pilot
2nd.Lt. Khani	No. 1 Squadron	Harvard Pilot
2nd.Lt. Ma'awat	No. 1 Squadron	Harvard Pilot
Capt. Azzam Maryud	No. 2 Squadron	Harvard Pilot, Squadron commander
2nd.Lt. Mottia	No. 2 Squadron	Harvard Pilot
Lt. al-Na'asani	No. 3 Squadron	C-47/Anson Pilot
Sgt. 1 st Class Nabulsi	No. 1 Squadron	Harvard pilot or Rear-Gunner
Lt. Nasser	No. 3 Squadron	C-47/Anson Pilot
Sgt. 1 st Class Ali Nat'ath	No. 1 Squadron	Harvard Rear-Gunner, killed 16 July 1948
Sgt. 1 st Class Natsri	No. 2 Squadron	Harvard Pilot or Rear-Gunner
2nd. Lt. Faisal Natzif		Harvard Pilot, killed 16 July 1948
2nd. Lt Sa'ad	Reserve	
Lt. Salim Sam'an	Reserve	Harvard Pilot, possibly killed 10 July 1948
Lt. Shar'abi	No. 3 Squadron	C-47/Anson Pilot
Sgt. 1 st Class Shwek	No. 2 Squadron	Harvard Pilot or Rear-Gunner
Sgt. 1 st Class Tinnawi	No. 1 Squadron	Harvard Pilot or Rear-Gunner
Lt. Omar Tzofar	No. 1 Squadron	Harvard Pilot, Squadron Commander
Lt. Abdu Wahaba	No. 2 Squadron	Harvard Pilot or Rear-Gunner
2nd.Lt. Zoabi	No. 2 Squadron	Harvard Pilot

The only aircraft available for offensive operations at the opening phases of the war were the Harvards and later on the Ansons. Two Harvards and one Anson were lost during the war to ground fire, and another was lost in a flying accident. Five paved airfields were available in early

1948 in addition to some twenty landing strips, all inherited from the French era. The entire SAF fleet was initially based at Damascus-Mezze - the nearest airport to the border with Palestine - which upon French withdrawal in the summer of 1945 became Syria's only international civil airport. In 1946 the airport was equipped with navigational aids and runway lighting was installed with aid from the US government which supplied the required materiel from its WWII surplus stocks in Europe, and was distinctly divided into civilian and military zones. Similar improvements were made in Aleppo/Nejrab which became operational in February 1948 and was later to become the SAF's flying school. By May 1948 a third airfield at Kamishli was completed but was not ready for operational use when war broke out. Following the IAF raid on Damascus in June 1948, all transport and light planes were evacuated to landing strips in the eastern part of the country, with only Harvards and Ansons remaining in Damascus-Mezze throughout the war.⁷⁶

⁷⁶ 'Report on the Strength of enemy air forces', 23 July 1948, IDFA 683-600137-1951.

3 The 1948 Palestine War

The SAF's operational activities during the Palestine war were very different from those practiced during the pre-war manoeuvres. For most of the war these operations were limited to bombing and close support at the tactical and operational levels as the SAF refrained from extending its activities to the strategic level due to lack of suitable aircraft. When this was done, operations were sporadic, largely reactive, and had very limited impact.

Control over the combat elements of the air force was retained by airforce headquarters in Damascus-Mezze with only very limited influence by the ground forces as far as targets and tactics selection of air support were concerned. Each brigade had a communications officer to maintain radio contact with the airforce headquarters. Each communications officer had basic aviation background, being either a pilot or a navigator, or simply an operations officer, thus enabling a higher level of understanding of the resources available to the SAF so as to combine these with the needs of the advancing ground troops.

The general concept of the SAF command was to attack Israeli army concentrations and moving troops on the one hand, and terrorize civilian neighbourhoods on the other. Whether for fear of being shot down over better defended areas or operational restrictions stemming from range and payload limitations, the SAF did not attempt during the initial offensive to attack targets situated beyond the operational front. This gave the ground forces the responsibility of advising SAF headquarters about the choice of targets and assessing the outcome of their attacks in order to enable fine tuning for next day's operations.

On 6 May the Syrian Army C.in. C. Gen. Abdullah Attfah, presented his plan for the invasion of Palestine at a meeting at the Republican Palace in Damascus. He proposed that both the Syrian and Lebanese armies proceed along the Mediterranean coastline to disrupt Jewish transport lines between the coastal road and the inner areas in the Galilee and Haifa regions, and to prevent the supply of ammunition and materiel by sea. Later on, the Hula valley and Tiberias would be cut off, the town of Safed and the Upper Galilee would be captured and a pincer movement would be initiated towards Nazareth, joining Iraqi and Arab Legion forces which were expected to move up north after conquering the town of Natania and the coastal plain.⁷⁷ This plan, which was largely based on the highly suspect cooperation and capabilities of the Arab Legion, was thwarted due to the reluctance of King Abdullah to follow it through.

Five days later the Syrian forces were given new orders to move south towards Zemah, on the southern shore of the Sea of the Galilee, and abandon the original plan to advance towards the coast. On 14 May, the day the state of Israel was proclaimed, Israeli intelligence sources identified the move of some 200 Syrian vehicles, including tanks, towards the Galilee.⁷⁸ This was probably the First Division, which set its headquarters at Mazraat ad-Din, about two and a half kilometres south of Kafr-Harb. A logistics depot was established close to Kafr-Harb, east of the Bnot-Yaakov Bridge north of the Sea of Galilee. Estimating that the initial attack would come from that area, the Israelis moved most of their forces to the Mishmar Hayarden area, north of the Sea of Galilee, while the Syrian plan was to invade south of the sea, towards Zemah and the two Dganya kibbutzim.⁷⁹

⁷⁷ Nafuri, 'al-Jaish al-Suri', pp 30-31.

⁷⁸ Pilot's logbook entry for 14 May 1948

⁷⁹ Pollack, Arabs at War, p. 450.

The SAF began combat operations on 15 May 1948 with the strafing and bombing of the two Dganyas, as well as the neighbouring villages of Kineret, Yavneel, and Ein Gev.⁸⁰ The following day six Harvard bombing sorties were carried out on Tiberias and the neighbouring villages of Afikim and Ashdot Yaakov. In that operation the SAF used three pairs of aircraft dropping twelve bombs, of which only two hit their targets causing minimal damage with the rest scattered in adjacent fields. By the end of the first day of fighting, Damascus Radio announced that 'Syrian battalions advanced towards Zemah and conquered the quarantine [customs check post] and Zemah camp. Tel Zemah, Sha'ar Hagolan and Massada were bombed from the air. The enemy retreated leaving seven bodies behind. Our losses are one killed and one injured. Nuqeib [Ein Gev] has been attacked by mortars and aircraft, and the settlement is under siege. A Syrian squadron has bombed settlements in the Zemah area'.⁸¹

On 17 May a single Harvard attacked the Nebi Yosha stronghold, surrounded by Israeli forces. By dawn a pair of Harvards spotted an Israeli Auster light aircraft but failed to shoot it down. A member of kibbutz Ein Gev vividly described the incident:

By evening it was quiet. At about 17:00 one of our "Primuses" [nickname for the Auster light aircraft] appeared over the Syrian village of Harb. When it crossed the border and flew inside Syrian territory, a couple of Spitfires [wrongly identified Harvards] were scrambled and the noise of machine guns was heard. Then, the "Primus" flew south trying to escape them but they caught up with it [the Harvard is much faster than the

⁸⁰ 'Report on the Bombing of Dganya and Kineret', 15 May 1948, IDFA 6-137-632-1951

⁸¹ Elhanan Oren, 'The War of Independence', in Alon Kadish (ed.), Israel's War of Independence 1948-1949 (Tel Aviv: Ministry of Defence Publishing House, 2004; Hebrew), p. 43.

Auster] and tried to 'leap' on it. This brought our comrades out of their trenches and we anxiously watched the uneven dogfight. When the aircraft reached Zemah, the "Primus" suddenly lost height and we were certain it was hit, but when we saw the enemy aircraft 'leaping' on it once and again it seemed it was still in one piece. When the two aircraft finally climbed away and the "Primus" was not in sight, we were sure it was shot down, but after a few seconds of tension and frustration we saw the "Primus" flying slowly over the Yavneel hills.⁸²

This episode demonstrated the poor piloting skills of the SAF, which failed to shoot down a much inferior aircraft despite having a two-to-one superiority. On the positive side, during the chase the Syrian pilots unwittingly spotted the Yavneel airstrip, used by the Galilee Squadron, which in turn made it no longer safe for Israeli operations.

On 18 May the Syrian army renewed the attempt to conquer Zemah, sending forward tanks and armoured cars followed by infantry and supported by a heavy artillery and mortar bombardment. As this attempt was considered crucial, the SAF was ordered, for the first time, to employ its 'heavy' bombers, the Avro Ansons. Oddly enough, a couple of Ansons, escorted by two Harvards, appeared over Kfar Yonah and Ein Shemer, two villages far away from the Syrian zone of operations. IAF intelligence wondered whether the aircraft were in fact Iraqi, but the fact that they were escorted by Syrian aircraft convinced it that they were indeed SAF fighters as

⁸² Hartoch, The Galilee Squadron During the War of Independence (Rishon Lezion: Israel Air Force Association, 1999; Hebrew), pp 29-30. See also Brig. Sayed Ali Edroos, The Hashemite Arab Army (Amman: The Publishing Committee, 1980), pp. 244-45; Nafuri, 'al-Jaish al-Suri', pp 11-13.

there were no Iraqi Harvards at Transjordan's air base of Mafraq, where Iraqi aircraft were deployed, and there was no formal cooperation agreement between the two air forces.⁸³

The intensified Syrian effort bore the desired fruit. Confronted with weak Israeli defence, by 19 May Syrian forces had captured Zemah, forcing the villagers of neighbouring Massada and Sha'ar Ha'golan to withdraw and inflicting the first serious setback on the IDF since the outbreak of hostilities. For its part the SAF tried to inflict damage on the well hidden Yavneel airstrip, with limited success.⁸⁴

On 20 May an overall assault on the Dganyas commenced, but surprisingly enough SAF involvement was virtually non-existent with only one recorded sortie far away from the battle zone. The defenders of the two kibbutzim totalled about a hundred men and women aided by some fifty soldiers, with no heavy weapons and a limited amount of light arms. The IDF defence plan relied on the massive use of aircraft and orders were issued to the defenders to refrain from shooting on aircraft unless being directly bombed. This was undoubtedly due to their inability to differentiate between IAF and SAF aircraft and the fear of mistaking IAF fighters for enemy aircraft. Taking advantage of the SAF's reluctance to operate at night, the aerial bombing of Syrian positions started at midnight of 19/20 May and continued till 5am, though the number of sorties and extent of bombing was restricted due to low availability of aircraft. Still, intelligence interception of Syrian radio communications revealed dismay with the total lack of air support: 'Enemy aircraft above, we have been promised by HQ the arrival of Iraqi planes, do not worry.... Two of our guns were damaged, do not worry, our aircraft will soon join the battle'.⁸⁵

⁸³ Nafuri, 'al-Jaish al-Suri', p. 17.

⁸⁴ 'Barak Battalion Diary', 18 May 1948, IDFA 33-128-1951

⁸⁵ Ibid, 20 May 1948

None of the hoped for Iraqi air support ever materialized. However, the IAF bombings caused only minor damage and failed to deter the Syrians from launching their attack on the Dganyas, which commenced shortly before the IAF bombardments ceased. Heavy artillery and mortars were used providing fire support for the advancing tanks and armoured cars with the infantry following closely behind. Fierce fighting by the defenders prevented the Syrian force from completing its mission and thwarted its original plan of establishing a bridgehead across river Jordan. By noon the attack had been contained a mere 100-200 metres from the kibbutzim's perimeter fence and an hour later the Syrian forces began a hasty retreat.⁸⁶ The Syrians explained the day's events years later by citing heavy defence fire, especially 20mm guns and 120mm mortars, and the use of snipers. This, however, failed to explain how numerically and materially superior infantry force, supported by tanks, armoured cars and heavy artillery fire, not only failed to defeat a poorly armed group of civilians and soldiers but also lost three or four tanks (almost a third of the operational tanks available) and four armoured cars.⁸⁷ No mention was made of the role played by the lack of air support in this setback.

The afternoon of 9 June saw two air attacks, one at 16:30, when a single Harvard dropped two bombs on an Israeli Galilee village, with no recorded damage, and the second in the evening, when four Harvards appeared over another kibbutz at low altitude but surprisingly dropped only three bombs, causing no harm or damage. A local eyewitness claimed that one of the four aircraft developed mechanical problems that prevented it from dropping its ammunition and forced it to return to its base with the bombs still attached.

⁸⁶ Golani Brigade HQ to IDF HQ, 20 May 1948, IDFA 1033-922-1973. See also Pollack, Arabs at War, p. 452.

⁸⁷ Nafuri, 'al-Jaish al-Suri', pp 30-31.

These attacks came in support of an earlier attempt by eight Syrian tanks to cross the river Jordan on their way to Mishmar Hayarden kibbutz. The effort was backed by heavy artillery fire and Harvards dropping bombs on the villages of Ein-Gev, Rosh-Pina and Ramot Naftali.⁸⁸ The attack on Ein-Gev was part of a wider effort to re-conquer the Arab village of Lubya (captured by the Israelis) that left twelve dead and forty wounded on the Israeli side. It was considered partially successful though most of the Syrian armoured cars were hit and two were completely destroyed. However, by the evening the village's defenders had been forced to evacuate the site to avoid further casualties.⁸⁹

The following day the Syrian army succeeded in capturing Mishmar Hayarden using some thirty armoured vehicles that crossed the river and encircled the village, enabling the infantry to enter the site and capture it in house-to-house fighting. Overhead, six Harvards were identified, operating repeatedly over the villages of Rosh-Pina, Mahanaim and Ayelet-Hashahar. The partial availability of airworthy aircraft prevented the support of a Syrian attack on the villages of Ramot-Naftali, Dan, Dafna and Kfar-Szold, despite urgent calls by infantry commanders for close air support. As a result, the Syrians retreated amidst heavy fire exchanges. Having only six operational Harvards at their disposal, the Syrian HQ decided to send the available aircraft to assist a combined infantry-artillery attack on Ein-Gev, isolated on the eastern shoreline of the Sea of Galilee. The early morning attack failed, as only one armoured car was available to support the soldiers, with the Syrian forces suffering heavy casualties and beating a hurried retreat. A second attempt was carried out at night, to no avail.

⁸⁸ 'Daily Report of the Carmeli Brigade', 9 June 1948, IDFA 3-5942-1949

⁸⁹ Northern Front HQ Report for 10 June 1948, 06:00hrs, IDFA 3-5942-1949

In the early morning of 11 June the Harvards returned, hoping to relieve the stranded Syrian force, only to erroneously bomb the police station of Tiberias, on the western shore of the Sea of Galilee, clearly of no use to the baffled Syrian forces watching from the other side of the lake. Later that day, a single Harvard bombed for the first time the Bet-Yossef kibbutz, dropping two 50kg bombs outside the perimeter fence but causing no damage.⁹⁰ Light planes of the IAF's Galilee squadron bombed the Syrian ground forces during the night to relieve the pressure on Ein-Gev, taking advantage of the SAF's aversion to night operations.

On 10 July, as fighting was resumed after a few weeks' ceasefire, the Harvards bombed the village of Mahanaim and the nearby airfield in a coordinated attack with Syrian ground forces. Retaliation by the IAF in the night hours caused damage on to the Syrian village of Alamein and the adjacent customs house as the SAF again refrained from employing the Harvards in night operations. The next morning an IAF Dakota took off for a bombing sortie on the key Golan Heights town of Quneitra, where Israeli intelligence targeted an airstrip. It was thought to have been in use by the SAF but was found to be deserted with no aircraft based there. The Dakota circled over the town and airstrip, encountering only light anti-aircraft fire which the pilot identified as 20mm guns positioned at a distance of 8-10 miles away. Due to low clouds and darkness, most of the released bombs missed their targets, yet the surprise attack reinforced the SAF's view that Quneitra should not be used as a forward staging base for the Harvards, thereafter using the site as an emergency landing strip only.⁹¹

⁹⁰ Northern Front HQ Report for 11 June 1948, 08:00hrs, IDFA 3-5942-1949. See also 'Golani Brigade Daily Report GL/76', 11 June 1948, IDFA 3-5942-1949

⁹¹ 'Quneitra Bombing Report', 10 July 1948, IDFA 922-15-1027

In retaliation for the Quneitra attack two Harvards appeared over Mahanaim, but to the astonishment of onlookers overshot their target and dropped only a single bomb far away into a small forest south of the airfield, causing no harm. Later that day, four Harvards bombed IDF forces near the Bnot-Yaakov Bridge in coordination with heavy artillery fire, but this was of little value to the Syrian Army which suffered heavy casualties and lost its forward stronghold at Tel-Azzaziat (on the Golan).⁹² In the early afternoon, the Harvards returned bombing and strafing repeatedly until darkness fell, enabling the Syrian ground forces to recapture a few Syrian villages and military strongholds. An Israeli intelligence report noted that 'during the early morning hours the enemy advanced with some 25 tanks and armoured cars, supported by artillery fire and aircraft bombardment. The air activity was felt throughout the day; their aircraft dived bravely and harassed our forces constantly with bombs and machine gun fire. Several vehicles were damaged... I must point out, however, our carelessness in not camouflaging our vehicles against air attacks'.⁹³

The next morning four to six Harvards dropped bombs and strafed IDF forces in support of ground operations. SAF air activity continued throughout the afternoon with the Harvards bombing Rosh-Pina, Mahanaim and Ayelet-Hashahar. The Israeli forces had to withdraw from their positions but the SAF again halted operations in the evening hours and was unable to prevent retaliatory Israeli air attacks on the Syrian forces in the area.⁹⁴

On 12 July no SAF aircraft were reported over the battlefield, leaving the Syrian artillery to attack IDF positions and futile attempts by Syrian infantry to recapture the Israeli-held post of

⁹² Northern Front HQ, 'Report for 10 July 1948 08:00hrs', IDFA 29-137-60-1951

⁹³ Carmeli Brigade 'Brosh Daily Report', 13 July 1948, IDFA 7353-38-1949

⁹⁴ 'Northern Front HQ Report for 11 July 1948 08:00hrs', IDFA 29-137-60-1951

Tel-Azzaziat. An IAF Auster returned at exactly 21:30, like the previous night, to bomb Syrian concentrations around Mishmar-Hayarden and on the road to Quneitra.⁹⁵ The next day the SAF returned in the late morning hours when the customary pair of Harvards bombed Hulata and the town of Afula, having no effect whatsoever on the military situation as the bombs missed their targets. Another attack in the early afternoon hours proved equally futile as two of the four bombs missed their targets and the other two failed to explode.⁹⁶

In the morning of 14 July a pair of Harvards dropped four bombs on the village of Tubah, east of Rosh-Pina airfield, one of which failed to explode.⁹⁷ The Harvards also bombed Hulata and Dardara, causing damage to property but no casualties.⁹⁸ Despite the intense air activity, the Syrians were forced to evacuate their entire fortification line dug during the ceasefire truce north-east of Kfar-Szold, and constructed a new line one kilometre east of Tel-Azzaziat inside Syrian territory.

On 16 July Harvards dropped eight bombs on Dardara, of which only two exploded; one of the attacking planes was shot down with its pilot and rear gunner killed. The attack helped the Syrian armour to drive the IDF back to Hulata, though the withdrawing forces managed to inflict heavy casualties on the Syrian units, including the destruction of several tanks and armoured vehicles. Interestingly enough, during the ensuing battle the SAF refrained from attacking the Israeli forces, probably because of the loss of the Harvard.⁹⁹

⁹⁵ 'Northern Front HQ Report for 12 July 1948 08:00hrs', IDFA 7353-38-1949

⁹⁶ Carmeli Brigade 'Brosh Daily Report', 13 July 1948, IDFA 3-5942-1949

⁹⁷ 'No 11 Battalion Daily Brosh Report', 10-14 July 1948, IDFA 20-137-60-1951

⁹⁸ 'Northern Front HQ Report for 14 July 1948 08:00hrs', IDFA 20-137-60-1951

⁹⁹ 'Carmeli Brigade Intelligence Report no. 124', 15/16 July 1948, IDFA 3-5942-1949

In the first attack on a major strategic target far away from the front, on 15 July two Ansons overflew the northern city of Haifa and dropped bombs in the port's vicinity. Though no serious damage was caused, the Syrian radio was quick to proclaim the city's bombardment.¹⁰⁰ That day the Syrian army also attempted a major assault on the Upper Galilee villages of Hulata, Ayelet-Hashahar and Mahanaim, using its remaining tanks and armoured cars towing guns and followed by infantry forces with air cover provided by two or three Harvards. As one of Ayelet-Hashahar defenders reported: 'Each morning a couple of Harvards descended on us, so low that we could see the pilots looking around for the best spot to drop their bombs'.¹⁰¹

The low flying tactic placed the attacking aircraft at risk as it brought them into the range of rifles and machine guns fire. At 09:35 that morning the Kibbutz member reported:

A Syrian aircraft, one of three attacking us since early morning, dived and dropped a couple of bombs on the kibbutz's western defence positions. While doing so the aircraft was hit by rifle and machine gun fire, lost its balance, fell onto the kindergarten yard and crashed. Both pilots [sic] perished. Did you ever experience real joy? The entire day having to watch helplessly the destruction [from the air] and now you witness revenge. This aircraft hovered over our heads sowing death on the entire kibbutz, diving boastfully and screaming in horror, diving and climbing again and again. But this time we caught it.¹⁰²

¹⁰⁰ 'Northern Front HQ Report for 15 July 1948 08:00hrs', IDFA 20-137-60-1951.

¹⁰¹ 'Ayelet-Hashahar War Diary', entry for 15 July 1948, IDFA 65-5942-1949.

¹⁰² Ibid.

In retaliation, the SAF sent the pair of Ansons to bomb targets near the city of Afula and the nearby Megiddo airfield, which had not been in use since the end of the First World War, though it had wooden dummies of aircraft placed around the runway as decoys.

Two days later, on 17 July, the Syrian army launched a spirited attempt to retake Tel-Azzaziat. The offensive was preceded by the air bombardment of kibbutz Dan by two Harvards, followed by heavy artillery fire on the Israeli-held Syrian post. In retaliation, and in order to prevent Syrian recapture of Tel-Azzaziat, the IAF deployed its three B-17 heavy bombers dropping some three tons of bombs on the Syrian positions in Mishmar-Hayarden. The Syrians responded with anti-aircraft fire but none of the B-17s were hit. According to an Israeli intelligence report (for the period 8-18 July), 'the SAF was active, particularly on the 10th, sending four or six [Harvard] aircraft very frequently and attacking our forces with bombs and machine gun fire'.¹⁰³

On 18 July the IAF sought to change the strategic equation by bombing Damascus with B-17 heavy aircraft. In retaliation, the SAF decided to attempt striking the Ramat-David military airfield in the Jezreel Valley, correctly identified as the base from where the B-17s took off for the attack. This was done 14:30 of the same day by two Ansons, which arrived over the base at a height of 1800 feet dropping a few bombs in the face of heavy anti-aircraft fire.¹⁰⁴ Four hours passed before the Ansons arrived again, this time a little lower to ascertain more accurate hits. They dropped incendiary bombs that caused fires near the aircraft revetments and on the runways rendering the airfield unserviceable for a brief period of time. Some 200 anti-aircraft rounds

¹⁰³ 'Northern Front HQ Summary of Operation Brosh', 18 July 1948, IDFA 65-5942-1949

¹⁰⁴ Ramat David air base platoon commander to HQ Operations, 'Report on air attack', 18 July 1948, IDFA 28-22-1956

were fired, a few of which hit one of the Ansons' tail and engine, causing it to emit smoke. The crippled aircraft slowly descended but was still able to land near Afula with no harm to the crew; both captured crewmen were found to be Iraqis, most likely on loan to the SAF. Later that evening, two Ansons flew once more over the Haifa port dropping four bombs; two fell into the sea and two caused very little damage to the docks. Despite IAF reports identifying the aircraft as Syrian, they were most probably Iraqi as the SAF had only one operational Anson following the loss of the second one near Afula.¹⁰⁵

On 19 July the 'Ten-Day Campaign' was over, as were the SAF's operations, though sporadic reconnaissance and patrol flights were seen on the Syrian side of the front till the end of September. While Syrian forces remained entrenched in Mishmar-Hayarden, it was evident that no breakthrough was feasible without air support. An ambitious plan for a renewed offensive was devised by a German advisor, but it came to naught once the dire situation of the SAF and the corresponding strengthening of the IAF had been fully realized in Damascus.¹⁰⁶

The SAF's high command was particularly concerned about a possibility of renewed bombardment of Damascus, approaching the IrAF with a request to base a flight of Hawker Furies in Damascus-Mezz so as to provide adequate defence against this eventuality. By November 1948 Iraqi troops had even been tasked with guarding Damascus-Mezze airfield while setting up an ammunition depot and facilities for prolonged stay. The Iraqi detachment stayed at the air base for almost six months returning to Baghdad only in early 1949 upon the delivery of

¹⁰⁵ Ibid.

¹⁰⁶ 'IAF Daily Intelligence Bulletins nos. 2 & 32', 22 November & 23 December 1948, IDFA 277-3800137-1951

new Fiat G-55 fighters to the SAF. On the defensive side, the Syrians built eighteen air raid shelters with a total capacity of 15,000 people.¹⁰⁷

As the month of July 1948 drew to a close, SAF aircraft gradually disappeared from the skies over the Galilee. Confining itself to few scattered, tactically futile reconnaissance flights, the Syrian air force withdrew its few remaining combat aircraft in an effort to salvage some of its strength, estimated at a single Anson, most probably on its way back to its Iraqi owner, and nine Harvards. By contrast, with the acquisition of new combat aircraft, including several bombers, the IAF achieved complete air mastery. By the end of July the IAF could field its heavy B-17 long range bombers, three of which were in service, in addition to one Spitfire and six Avia S-199 (a Czechoslovak version of the Messerschmitt Me-109 of WWII fame) fighters, as well as three transport aircraft that could be used as makeshift bombers; by mid-September it possessed nine Avia S-199 and two Spitfires for air combat, as well as three new medium range bombers, a couple of Bristol Beaufighters and a single de-Havilland DH-98 Mosquito.¹⁰⁸ This meant that from early August 1948 to the formal signing of the ceasefire accords with Israel in March 1949 the Syrian army could no longer rely on aerial support by its own air force.¹⁰⁹ By the end of 1948 the Syrian liaison officer attached to the Iraqi army headquarters was reported to have admitted that the Syrian army was incapable of initiating any military activity of any sort other than demonstrative.¹¹⁰

¹⁰⁷ 'IAF Weekly Intelligence Summary no. 1', 22 November 1948, IDFA 277-3800137-1951

¹⁰⁸ Cohen, Defending Water Resources (Tel Aviv: Ministry of Defence Publishing House, 1992; Hebrew), pp. 755-57.

¹⁰⁹ 'IAF Daily Intelligence Summary no. 1', 5 November 1948, IDFA 277-3800137-1951

¹¹⁰ 'IAF daily Intelligence Bulletin No. 40', 31 December 1948, IDFA 277-3800137-1951

SAF Performance

The SAF's meagre impact on Syria's ground operations, and virtually non-existent strategic impact, was both reflected in and influenced by its failure to neutralize its Israeli counterpart. After the incapacitation of the Yavneel airstrip following its accidental discovery in mid-May, the Israeli Galilee squadron quickly relocated its aircraft to the Rosh-Pina (Mahanaim) airfield; in June, when Rosh-Pina became a regular target for the Harvards the squadron relocated again, this time to the Ramat-David airbase. The SAF's reluctance to send the Harvards on missions far away from the combat zone left the base largely unscathed (with the exception of the 18 July attack noted above), enabling the Galilee squadron to attack Syrian targets with virtual impunity.

Nowhere were the limits of the SAF's operational capabilities more glaringly exposed than in its repeated failure to prevent the IAF air raids on Damascus, all of which penetrated the Syrian airspace without being challenged by the Harvards or encountering anti-aircraft fire, allowing the Israeli aircraft to hover over the city and drop their bombs without interruption.

The first bombardment took place on 11 June, 03:12am local time, when a makeshift Dakota bomber, loaded with two tons of bombs, took off from the Tel-Nof air base (in central Israel) flying for more than fifteen minutes over Damascus and releasing the bombs manually.

According to American correspondent John Roy Carlson, who stayed in Damascus at the time, it was only after the aircraft had already left that Syrian anti-aircraft guns opened fire, while traffic on the streets was stopped by nervous policemen adding to the panic long after the bombardment had ceased. 'From a pure psychological point of view the effects of the bombing

were devastating as it was the first time Syrians personally witnessed the powerful Jewish force close at home', he wrote. 'Rumours spread that the Jews have an Atom bomb which [Albert] Einstein helped them to obtain. Such fear was never known in Arab capitals in their long history'.¹¹¹

The second attack, as noted earlier, took place on 17 July, this time ensuing from the closer Ramat-David air base. As the Dakota's engines were heard from a distance, the capital's lights were switched off and ineffective anti-aircraft fire was directed at the incoming aircraft. Two powerful light projectors were lit at Damascus-Mezze airfield in an attempt to locate the intruder so as to direct the fire more effectively, but the defenders soon understood that this would only enable the Israeli crew to spot the base in the relative darkness and quickly switched them off. For full forty-five minutes the aircraft dropped a variety of bombs, totalling 2.5 tons, without any of the Harvards taking off to confront it (the SAF possessed no night interception capabilities) and the anti-aircraft guns firing constantly but missing their relatively large and slow flying target. Later intelligence reports confirmed that the Damascus-Mezze airfield was not hit, though the city took a heavy toll with some sixty people killed, 80-100 wounded, and unspecified number of houses destroyed. Panic spread throughout the city with one source estimating that up to 20,000 people fled Damascus to the mountains and nearby villages.¹¹²

Within a day the SAF lost air superiority over its capital for the third time as the fearsome B-17 'Flying Fortress', acquired by the IAF only a few days earlier, made a daylight raid on Damascus and while cruising at 12,000 feet dropped eight 100kg, four 25kg and ten 10kg bombs

¹¹¹ Cohen, *Defending*, p. 306.

¹¹² 'Report on the bombing of Damascus', 2 August 1948, IDFA 137-280-1951

plus two cases of alcohol bottles, the latter for the sole purpose of creating shrieking sound effects intended to scare the population.¹¹³

Easily identifying the huge B-17, being the only four-engine bomber in IAF use, the Syrians promptly filed a complaint with the US legation in Damascus, which reported the event to Washington:

Though the Syrian government complained bitterly to American officials in Damascus that the airplanes [sic] proved the U.S. was not respecting its arms embargo, U.S. officials announced that the planes had been acquired from American civilians over whom the U.S. government had no control. Damascenes found some poetic justice when one of the bombs dropped by a Flying Fortress hit the residence of the U.S. Military Attache, badly damaging his house and slightly wounding the Attache. The Syrian government censored all press reports about the provenance of the bombers in order to avoid further stirring up the passions of the local populace.¹¹⁴

The repeated bombing of Damascus shocked the Syrian leadership and was one of the driving forces behind its decision to acquire fighter planes.¹¹⁵ A local newspaper reported that the bombing made a strong impression on the city's inhabitants, one of the results being the stoppage of construction work. Many members of the wealthier classes left for Zabadani, some thirty kilometres from Damascus. Naturally there were those within the army who tried to

¹¹³ Shlomo Aloni, Hammers: The Story of No. 69 Squadron (Atglen: Schiffer Military History, 2010), p. 17.

¹¹⁴ 'Syria Monthly Political Review', 31 July 1948, Robert Memminger, Charge d'Affairs at the U.S. Legation in Damascus to Secretary of State, U.S. National Archives file 890D00/7-3148.

¹¹⁵ 'The Syrian Air Force', IAF Intelligence Chief to Branches 1 & 7, 17 January 1949, IDFA 10-1261-1949.

whitewash the lack SAF response by such flimsy claims as that the 'Israeli aircraft bombing Syrian territory had Transjordanian insignia on their wings in order to deceive the Syrian forces'.¹¹⁶

Though such an 'explanation' could hardly convince any serious observer given the strained relations between Damascus and Amman during the war, it served as a handy ploy for diverting criticism away from the army. The casualties tally in the third bombing was twenty dead and eight wounded in addition to extensive material damage. A Jewish intelligence source in Damascus reported that 'an entire road [Arnun Street] was destroyed and damage to property was estimated at ILP 5 million. People in Damascus were terrified and those who could not reach Zabadani fled to the villages well outside the city boundaries'. The source reported that almost no damage was caused to the Damascus-Mezze airfield or other Army units.¹¹⁷ It would take the SAF seven months to organize proper searchlight posts around Damascus, with regular blackout exercises starting as late as 25 February 1949, with a mere five operational searchlight posts.¹¹⁸

By this time the war was drawing to a close the fear of IAF bombardment of Damascus had diminished almost completely. Judging the military effectiveness of the three bombing raids one cannot escape the feeling that had the IAF intensified its attacks on the capital and strategic targets deep in Syria (something that was well within its reach after the delivery of the B-17s in July) the effect on Syria's strategic and military position would have been far more dramatic than it actually was. As MAHAL pilot, Milton Rubinfeld, an American by birth who had flown many

¹¹⁶ 'Intelligence Information Bulletin nos 6 & 10', October 1948, IDFA 71-600137-1951

¹¹⁷ 'Intelligence reports from Damascus, Beirut, Tyre and Amman', IAF Intelligence Branch, Haifa, 4 August 1948, IDFA 98-600137-1951

¹¹⁸ Palmah to Head of Intelligence, 'Syrian Air Force Report', 6 March 1949, IDFA 10-1261-1949.

combat missions with the US Navy and the RAF in WWII, wrote to Israeli prime minister David Ben-Gurion after the second attack on Damascus: 'A large scale bombing on a target like Damascus must be carried out at night, using the largest [long range] aircraft in our possession like the B-17, Constellation, C-46, C-47 [Dakota] and every other aircraft type able to carry bombs. A successful attack like that, to be carried out twice a night, or two nights in succession, will be able to destroy Damascus completely'. He suggested that after a bombardment leaflets should be dropped over the city warning of further attacks and maximizing the psychological effect on the populace.¹¹⁹

Despite the initial impact, the first attack in June did not deter the Syrian army from renewing its offensive on Mishmar Hayarden and other areas in northern Israel barely the day after, including the use the Harvards for close air support. The month-long respite between the Damascus bombings led to the loss of precious time, resulting in the suffering of Israeli northern villages and towns from Syrian ground and air attacks. Likewise, the IAF's failure to concentrate its efforts on targeting military installations in the vicinity of Damascus was the main reason why the SAF remained largely unscathed by the attacks in stark contrast to the civilian population.¹²⁰

Evidently, the SAF was saved thrice only because of the military ineffectiveness of the IAF bombings. Had Damascus-Mezze been targeted, and the SAF's only combat unit destroyed, the situation, particularly along the northern front, would have changed dramatically in Israel's favour much earlier than it actually did.

¹¹⁹ Letter from Milton Rubinfeld to David Ben-Gurion, 25 July 1948, IDFA 7-137-209-1951

¹²⁰ IAF Intelligence Report, 26 July 1948, IDFA 10-1261-1949

Table 3 Selective Summary of Syrian Air Force Operations over Israel May-July 1948

Date	Aircraft Type	Number of aircraft	Number of sorties	Target
15.5.48	Harvard	1	1	Ein Gev
16.5.48	Harvard	3	9	Afikim, Ashdot Yaakov, Tiberias
	Harvard	2	2	Bet-Yossef
	Harvard	2	6	Jordan Valley villages
17.5.48	Harvard	1	1	Nebi-Yosha
	Harvard			Shaar Hagolan, Massada
19.5.48	Harvard	2	6	Ramot Naftali, Nebi Yosha, Mishmar Hayarden
20.5.48	Harvard	1	1	Mishmar Hayarden
		2	1	Yavneel
21.5.48	Harvard	2	6	Yavneel and Jordan Valley villages
23.5.48	Harvard	2	2	Ein Gev
24.5.48	Harvard	2	2	Mahanaim
25.5.48	Harvard	1	1	Dan
26.5.48	Harvard	2	4	Yavneel, Ein Gev
28.5.48	Harvard	2	2	Tel al-Qadi
29.5.48	Harvard	2	2	Ramot Naftali
30.5.48	Harvard	2	2	Kineret
	Harvard	2	2	Ramot Naftali
31.5.48	Harvard	1	1	Shaar Golan
1.6.48	Harvard	2	2	Kfar Giladi
	Harvard	2	2	Dan
2.6.48	Harvard	1	1	Kfar Giladi
3.6.48	Harvard	1	1	Pilon Camp (Eshel)
5.6.48	Harvard	2	2	Ayelet Hashahar, Mishmar Hayarden
	Harvard	4	4	Rosh Pina
6.6.48	Harvard	2	2	Ayelet Hashahar
	Harvard	6	6	Malkiya
	Harvard	6	6	Rosh Pina
	Harvard	2	2	Mahanaim, Mishmar Hayarden
8.6.48	Harvard	2	10	Ayelet Hashahar, Mishmar Hayarden, Dan, Dafna, Ramot Naftali
	Harvard	4	4	Hanitha
9.6.48	Harvard	1	1	Zar'in
10.6.48	Harvard	2	4	Rosh Pina, Mahanaim
11.6.48	Harvard	6	6	Mishmar Hayarden
		1	1	BetYossef, Zemah Police station

		1	1	Ein Gev
10.7.48	Harvard			Yisud Hamaala, Dardara
	Harvard			Ayelet Hashahar
	Harvard			Rosh Pina, Hulata
	Harvard			Mahanaim
	Harvard	4	4	Bnot Yaakov
11.7.48	Harvard	2	1	Mahanaim
12.7.48	Harvard			Hulata
13.7.48	Harvard	2	2	Hulata, Dardara
14.7.48	Harvard	2	2	Hulata, Dardara
	Harvard	2	1	Tubah
15.7.48	Anson	2	1	Haifa
	Harvard	2	2	Hulata, Dardara
	Harvard	1	1	Megiddo airfield
16.7.48	Harvard	2	2	Ayelet Hashahar (one aircraft shot down by anti aircraft fire)
	Anson	2	1	Afula, Megiddo airfield
18.7.48	Anson	1	1	Kfar Yona, Ein Shemer airfield
	Anson	2	1	Ramat David air base (attacked twice, at 14:48 and 18:50), one aircraft was hit and forced to land

Sources:

- (a) List of bombardments on settlements, IDFA 1045-108-70
- (a) Carmeli, Yiftah, Golani Brigade Diaries, IDFA 6647-49-53, 5942-49-65
- (b) Various daily newspapers, Haaretz and Maariv
- (c) Shahan Avigdor, Wings of Victory, p. 181, 191
- (d) Operation Brosh Diary, July 1948, IDFA 15-715-49

Table 4 Syrian Aircraft Lost During the Palestine War

Date	Aircraft Type	Crew	Location	Circumstances
10 July 1948	AT-6 Harvard no. 208	P Capt. Ibrahim (Iraqi) or Salim Sam'an RG Sgt. Muhi ad-din Atassi	Damascus-Mezze	Hit by IAF Avia S-199 over Ein Gev, Israel. Atassi died of his wounds after his aircraft landed safely in Damascus
16 July 1948	AT-6 Harvard no. 204 or 206	P Lt. Faisal Natzif RG Sgt. Ali Natath	Ayelet-Hashahar	Shot down by anti-aircraft fire, both crew members killed
18 July 1948	Avro Anson	Iraqi crew, unhurt	Afula	Force landed following damage inflicted during the attack of Ramat-David airbase
March 1949	AT-6 Harvard	German pilot	Damascus-Mezze	Crashed during training flight

4 Recovery and Buildup, 1949-58

Israel's success in defeating the pan-Arab assault and expanding its territory beyond the November 1947 UN-ascribed borders reinforced Syrian perceptions of the nascent Jewish state as an aggressive and expansionist entity bent on enlarging its territory in line with the biblical vision 'from the Euphrates to the Nile'.¹²¹ As such it remained the foremost perceived threat to Syria's national security with the SAF playing an important part of the overall security concept, mainly due to its ability to act rapidly and be relatively free of physical obstacles compared with ground forces. This was evidenced inter alia by the fact that, in the decade attending the Palestine war, the Syrian government devoted the lion's share of its military budget to aerial buildup: acquiring modern aircraft, forming new combat squadrons, expanding air bases, and recruiting auxiliary air and ground crews. By the end of the first decade, with increasing Soviet assistance, a radar system had been installed and night fighting capability had been developed.

This buildup, however, was not exclusively, perhaps even primarily, influenced by pure military considerations, not least since Syria faced no external aggression, let alone general war, during the 1950s. Rather, the development of the SAF, and the Syrian military for that matter, was largely geared to fending off domestic threats to both the Syrian state and regime.

¹²¹ Abdulhay Sayed, 'Overcoming Prejudice: A Syrian Perception of the Israeli Threat in the Arab-Israeli Region of Conflict', in James Leonard et. al, National Perceptions in the Middle-East (New-York: United Nations Institute for Disarmament Research, 1995), p. 70.

Sectarian schisms

As one of the most ethnically and religiously diverse societies in the Middle East, Syria has been riven by sectarian tensions and repeated outbursts of violence dating back to its colonial Ottoman and French days, notably the wholesale massacres of Christians in the 1860s and the Druze uprisings of 1925-27.¹²² Small wonder, therefore, that given its high mobility that enabled it to simultaneously operate throughout the country in relatively short periods of time the SAF was viewed from the outset as a preferred tool for the suppression of riots and mutinies. The older ground attack aircraft, such as the Harvard and Fiat G55/G59, were particularly valuable since their slow flying characteristics enabled accurate strafing and rocketing of local tension pockets. This tactic was significantly different from that employed in inter-state combat operations, such as those initiated against Israel. Lacking air defence and possessing only small arms, the rebels rarely posed any threat to SAF aircraft.

As early as 1947 the Syrians filed a request with the British government for the supply of Bristol Beaufighter light bombers, apparently motivated by the urgent need to suppress sectarian strife as a large-scale confrontation with a future Israel was not yet looming on the horizon and no need for a tactical bomber was envisaged. The RAF had by that time about 36 surplus aircraft available for disposal but British officials doubted the usefulness of these aircraft on one hand, and feared their possible deployment along the Syria-Palestine border on the other (though the

¹²² See, for example, H.H. Jessup, Fifty-Three Years in Syria (New York: Fleming H. Revell, 1910), vol. 1, pp. 157-214; Hussein Ghadhan Abu Shaqra (ed.), al-Harakat fi-l-Lubnan ila Ahd al-Mutassarrifiya (Beirut: Matba'at al-Ittihad, n.d.), pp. 99-136; Leila Tarazi Fawaz, Occasion for War: Civil Conflict in Lebanon and Damascus in 1860 (London: Tauris, 1995); Collelo Thomas (ed.) Syria: A Country Study (Washington DC: Library of Congress, 3rd Edition, 1988), pp. 62-80.

Syrians, as noted above, had no such intention in mind at the time). In the words of a senior Foreign Office official: 'As the aircraft selected will have considerable offensive power, we should like to be kept informed of the numbers supplied. We have to take into account the possibility that in the event of troubles between Arabs and Jews in Palestine, equipment in the possession of Arab states like Syria might be used on the Arab side'.¹²³

The reasons for the SAF's preference to the Beaufighter remain unclear, other than its availability at a relatively low price. It might have also been that army officers serving during the Vichy period remembered their effective use by the RAF when operating out of Cyprus in driving the Wehrmacht forces out of Syria. In the end, the Beaufighter deal was aborted by Whitehall and the SAF was forced to make do with the Harvards acquired that year from the United States.¹²⁴

The first known use of the Harvards (and Fiats) for counterinsurgency operations in the Druze region was recorded on 5 April 1949. Initiated by Colonel Hussni Zaim a mere week before his seizure of power in a bloodless coup, it was perceived more as a demonstrative act of political self-assertion than a purely operational action.¹²⁵ The following year, in June 1950, three Harvard aircraft were dispatched to the northeastern Jazirah province to aid the Syrian army's operation against two warring tribes. For the duration of this mission the aircraft deployed at the nearby airstrip at Hassjeh to enable shorter response times.¹²⁶ In 1954, the SAF participated in the suppression of the Druze revolt at Jabel Druze, in southern Syria, by

¹²³ Beith, Foreign Office, to Dickson, Ministry of Supply, E1605/908/89, 26 February 1947, TNA, FO371/62139

¹²⁴ Barnes C.H., *Bristol Aircraft since 1910* (London: Putnam, 1988), p. 297.

¹²⁵ 'Intelligence Summary no. 102', 8 April 1949, IDFA 121-535-2004

¹²⁶ 'Intelligence Summary no. 160', 4 July 1950, IDFA 673-535-2004

dispatching Fiat aircraft that bombed rebel positions and conducted reconnaissance flights.¹²⁷ With the reduction of sectarian strife in the latter part of the 1950s, on the one hand, and the gradual shift to jet fighters and withdrawal of the last piston engine aircraft, on the other, the SAF's role in the suppression of domestic strife declined significantly.

The SAF as a political player

The humiliating 1948 defeat in which the nascent state of Israel successfully defeated the armed forces of five Arab states as well as a substantial irregular pan-Arab force (dubbed the Arab Liberation Army, ALA), ushered in a prolonged period of political instability in Syria, and the wider Arab world more generally, as the officer corps quickly ascribed culpability for the 'Catastrophe' (Nakba), as the defeat was commonly known, to the respective civilian leaderships.

Already at the end of May 1948, a mere two weeks after the invasion of Israel, Prime Minister Jamil Mardam sought to deflect the simmering discontent within the armed forces by replacing Zaim, who commanded the relatively successful offensive at Zemah, as chief of the general staff. This, however, failed to calm down the troubled military-civilian relationship as Zaim maintained an uneasy relations with his civilian superiors during the war, and in December 1948 Mardam was forced to resign his post and was replaced by Syria's ambassador in Paris, Khaled Azm. This move, too, failed to satisfy the army officers and on April 11, 1949, Zaim launched his bloodless coup that made him the first in a long string of military dictators ruling

¹²⁷ 'Annual Intelligence Summaries for the years 1954-56', MD586.54, IDFA 687-535-2004
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Syria during the 1950s.¹²⁸ The SAF, which was aligned with Zaim, was ordered to drop propaganda leaflets over Damascus calling for support to the country's new leader.¹²⁹

On 14 August 1949, after a mere four months in power, Zaim was ousted in a military coup and summarily executed together with his prime minister, Muhsin Barazi. Colonel Sami Hinnawi, commander of the 1st brigade that captured Mishmar Hayarden during the Palestine war, became the country's leader, quickly promoting himself to the rank of general and chief of the general staff.

In an attempt to introduce a sense of normalcy, Hinnawi set up a civilian government, but the country was effectively ruled by a committee of officers, which he headed and which constituted the supreme legislative, executive and judicial authority in Syria. Amongst its members was an air force officer, Captain Mahmud Rifa'i. Born in 1913, he studied aeronautical engineering in Germany as part of his voluntary WWII service in the Wehrmacht as a lieutenant in a paratroops and commando unit on the Russian and African fronts as well as in counterinsurgency operations in Greece and Yugoslavia. Rifa'i was interned by the British after the war but returned to Syria in 1946 to join the nascent SAF. When the Palestine war began he joined the ALA due to his vast WWII experience; being a pilot, his contribution to the SAF would have been considerable.¹³⁰ Hinnawi appointed Azzam Maryud as acting SAF commander-in-chief, but his tenure lasted only four months as Hinnawi was deposed in a third consecutive

¹²⁸ Beeri, Army Officers in Arab Politics, p. 55; Michael H. Van-Dusen, 'Intra- and Inter-Generational Conflict in the Syrian Army', Doctoral dissertation, John Hopkins University, 1973, p. 172. For discussion of the succession of military regimes in the 1950s and early 1960s see: Andrew Rathmell, War in the Middle East: the covert Struggle for Syria, 1949-1961 (London: Tauris, 1995).

¹²⁹ 'Intelligence Summary no. 100', 4 April 1949, IDFA 675-535-2004

¹³⁰ Beeri, Army Officers, p. 61.

coup in less than one year, led by Colonel Adib Shishakli, his successor as commander of the 1st brigade, who took over power during a nocturnal raid on Damascus on 18 December 1949.

Eight months after his seizure of power, on the night of 31 July 1950, Shishakli had his Alawite SAF commander, Colonel Muhammad Hassan Nasser, with whom he had maintained an uneasy relationship, assassinated. Considered a highly capable young officer (he was born 1917), Nasser was an active participant in Zaim's coup and was subsequently nominated Head of the Operations Division of the Syrian Army. Though not a pilot, he was regarded by many SAF officers as a dynamic figure, politically well connected and in an excellent position to further the SAF's aims within government circles. After Hinnawi's rise to power Nasser was dismissed from his post, only to be appointed SAF commander in December 1949 following the Shishakli coup. Though his assassins were never found, it was widely believed that Nasser was executed at Shishakli's orders as the two had famously fallen out and the dictator feared (apparently not without reason) that the ambitious air force commander had designs on his post.¹³¹ Nasser was replaced by Captain Rashid Ghailani, a veteran pilot who flew during the Palestine war and a former commander of the transport squadron and Aleppo air base. Ghailani was not promoted upon his appointment and his official title remained 'acting commander'. He led the SAF for less than four months and by early November 1950 was dismissed and replaced by Colonel Said Hubi.

Born in 1909, Hubi was a graduate of the officers' academy in Homs, serving during the French mandate in the intelligence division of the army (the 'Deuxieme Bureau'). In 1945-47, following a promotion to the post of academy commander, Hubi headed the division. When the

¹³¹ 'Intelligence summary no. 163', 17 August 1950, IDFA 673-535-2004

Palestine war began Hubi returned to his former position but being regarded a Zaim follower, he was exiled by Hinawi to Washington, where he served as military attaché. Following Shishakli's coup he returned to Syria. Hubi was not a pilot but was appointed SAF C.in. C because of his loyalty to the regime and his wide military expertise and experience, combined with outstanding organizational skills.¹³²

Towards the end of 1951, following political criticism of the military's meddling in public affairs, particularly from the People's Party and the National Party, Shishakli disbanded the government and banned political activity in Syria in what amounted to a de-facto military dictatorship. He promptly appointed his followers to senior army positions adding the title of deputy prime minister to that of chief-of-staff. In what was practically Shishakli's second coup, Hubi was appointed commander of the armoured corps, after only ten months in office as SAF commander-in-chief. He was replaced by Lt. Col. Sehil Ashi, a staff officer who graduated from the Homs Academy, where he had served as instructor from 1948 to 1950. Ashi was then dispatched to France to study at the staff officers' academy. Despite having no aeronautical background, his loyalty to Shishakli was unwavering. The decision to move Hubi to the armoured corps was due to Shishakli's fear that his palace might be encircled by tanks in a potential attempted coup, whereas the SAF was considered less likely to pose a similar threat to the regime.¹³³ Several SAF officers considered Zaim followers fled Syria, most of them to Iraq

¹³² 'Intelligence summary no. 165', 10 November 1950, IDFA 673-535-2004

¹³³ 'Intelligence report no. 177', 4 December 1951, IDFA 673-535-2004. See also: Beeri, Arab Officers, pp 67-68.

and Jordan, following orders issued by Shishakli for their arrest. SAF aircraft were ordered to patrol Syria's southern and eastern regions to encounter possible riots there.¹³⁴

The upheaval within the ranks led to Shishakli's increased dependence on the relatively loyal SAF. As the dictator's anti-Israeli rhetoric became increasingly aggressive,¹³⁵ the SAF was ordered to increase its patrolling missions along the border with Israel (and Iraq). Fiat G55 fighters flew several missions along the Syrian-Israeli border, in some instances overflying Israeli territory. When the Iraqis protested, the Syrians replied that these were training flights, which erroneously crossed into Iraqi airspace.¹³⁶

In January 1954 Shishakli detained several political leaders, including the prominent Druze leader Sultan Atrash, triggering protests and insurrections in the southern parts of the country. The military responded by sending tanks to attack Druze villages while the SAF sent its Fiat G55 aircraft on a number of bombing sorties. This operation was the catalyst for Shishakli's ousting, for while he was busy suppressing the Druze revolt in the south army units in the northern Jazirah region bordering Iraq, and in the central area (except for Damascus and the adjacent Damascus-Mezze air base), revolted en masse, bringing about the end of the regime. By February 1954 Shishakli succumbed to the rebel forces having realized that he had lost the confidence of the armed forces, culminating in the desertion of the hitherto loyal commander of the 6th brigade stationed on Jabel Druze, Colonel Umar Qabbani.

¹³⁴ 'The Situation in Syria', Report by the Head of the Intelligence Corps, 26 December 1949, IDFA 37-2168-1950.

¹³⁵ In August 1952, for example Shishakli stated: 'Syria, as always the leader of the Arabs, must force its will and take by force whatever is hers in Palestine. The Middle East is not large enough to house both Arabs and Jews, either the Arabs flee back to the desert and sea, or the Jews return to their homelands in Europe and elsewhere'. Moshe Maoz, *Syria and Israel* (Oxford: Oxford University Press, 1995), p. 31

¹³⁶ 'Intelligence summary no. 179', 19 February 1952, IDFA 695-535-2004

For the first time since the end of the Palestine war and after five years of military dictatorships a parliamentary government was established in Syria. The SAF was an early deserter of Shishakli, and on 27 February 1954 the Aleppo regional radio station announced that the air force, including the paratroopers' corps, sided with the rebels. The Aleppo air base commander ordered the First Squadron to carry out low level demonstrative flights over Damascus while light planes of the Fourth Squadron dropped propaganda leaflets over the capital. The reaction, however, was not unanimous and some pilots of the First Squadron based at Damascus-Mezze remained loyal to Shishakli and refused to take part in the revolt. Those who joined the rebels, despite being prohibited to do so, relocated from Damascus-Mezze to Aleppo but returned to their base on 1 March without any reprimand or punishment.

Throughout the rebellion and in its aftermath the army feared an Israeli intervention. During the late afternoon of 1 March two SAF Meteor jet fighters were dispatched east of the Sea of Galilee to patrol and observe possible IDF force movements along the border.¹³⁷ Sultan Fahmi, acting SAF commander for less than a year, was permanently appointed air force chief of staff (practically the SAF's second highest ranking officer). Fahmi was a fighter pilot since 1950, trained in Britain and Italy, and though failing the conversion course in Britain he was nevertheless appointed First Squadron (Meteor) commander, a role he assumed for only a few months before being appointed commander of Damascus-Mezze. Though an airman, his rise within the ranks was due to his loyalty to the regime rather than to professional excellence.

Fahmi was replaced by Lt. Col. Abdel Karim Aziz. Born in 1912 of Muslim faith, like his predecessors he was not a pilot. However, his past military experience included commanding the

¹³⁷ 'Intelligence Review', February 1954, IDFA 679-535-2004

Syrian artillery (1949) and the front with Israel (1952). Prior to Shishakli's coup, Aziz tried a self-styled coup of his own but failed and was dismissed from the army, returning in 1954 after Shishakli's downfall.¹³⁸

Compared to the army, the SAF's involvement in politics was marginal and the main problem was the appointment of commanders-in-chief who were not airmen and were not familiar with modern air warfare, having been chosen purely on the basis of their loyalty to the ruler. With three successive coups in five years this meant that each commanding officer was on average a year and a half in command leading to increased stagnation and inefficiency, with the force unable to fulfil its basic missions. The SAF's influence within the army was weak and it continuously required external help, either from Egypt or Iraq, well into the mid-1950s. The anti-aircraft defence system was poorly organized and it became apparent to the SAF command that Damascus and important military installations were dangerously exposed to air attacks.¹³⁹

After successive years of non-aviators heading the SAF, Col. Rashid Ghailani was appointed C.in C. in mid 1956. Having been trained in Syria and Iraq and served as a pilot during the Palestine war, Gailani studied at the French War College where he participated in command and staff courses. Since 1953 he was Deputy SAF C.in C. and headed various arms procurement missions in Europe. During the 1956 Suez crisis he was the SAF's senior representative in the joint Syrian-Egyptian coordinating committee. His tenure was brief and after a year or so he was succeeded by Lt.Col. Wadiah Muqa'abri. A Christian born in 1917, Muqa'abri studied in France, was a flight instructor at the central flying school by July 1949 and a Fiat pilot by the summer of

¹³⁸ 'Report on the Syrian Air Force', 1955, IDFA 679-535-2004.

¹³⁹ 'The Arab Air Forces in 1955', February 1956, IDFA 687-535-2004.

1950. He was promoted a year later to head the central flying school. Muqa'abri returned to the role of C. in. C in September 1957 in what represented the continuation of the existing pattern of political appointments to top military posts. As shall be shown in Chapter 5, Syria's growing reliance on Egypt from 1955 onwards, culminating in the merging of the two states into the United Arab Republic (UAR) in 1958-61, had a marked influence on the SAF as far as the officer corps was concerned, with promotions being dictated by the nominee's political affiliation. For while Egyptian President Gamal Abdel Nasser identified the army-politics nexus as the main reason for Syria's instability and strove to break this Gordian knot, the strengthening of the Syrian Ba'ath party as a result of the union continued the military dictatorships' tradition of the appointment of officers on the basis of their political loyalty rather than military competence, though this time loyalty was rendered to a party rather than a person.¹⁴⁰

Weapons procurement

The Italian connection

With the United States and Britain maintaining a strict arms embargo on their Middle Eastern sales during the 1948 war and in its wake, Syria (and Egypt) found Italy the only country producing modern fighting aircraft and willing to sell. The major manufacturer was Fiat Aviazione, builders of aircraft for the Italian Air Force since World War One. In April 1949 the first delivery of thirteen Fiat aircraft - twelve G55 fighters and a single G55 trainer - was shipped to the port of Beirut then trucked by the Syrian army to Damascus where they were assembled by

¹⁴⁰ Eli Podeh, The Decline of Arab Unity (Brighton: Sussex Academic Press, 1999), pp. 52-54.

Italian technicians and test flown by an Italian pilot. The single trainer aircraft was flown to Syria via Greece and Turkey.¹⁴¹

Negotiations for the supply of additional aircraft continued apace and in the summer a deal was concluded for the supply of thirty-six aircraft, including twenty-four G59A fighters, two G59B advanced trainers and ten G46 primary trainers. The G-55 was a 'stop gap' aircraft, pending the arrival of the more advanced G-59, re-engined with Rolls-Royce Merlin engines. The G-46 was a dedicated training aircraft built in both single and dual seating for primary and advanced training for the Italian Air Force.¹⁴² The first ten Fiat G46s arrived in October, while deliveries of the fighters took place between March and September 1950, two to four each month. By August 1950 eight Fiat G-59s had been delivered, being the last batch of the original order of twenty-four aircraft.¹⁴³ The aircraft were crated and shipped by sea. Italian mechanics assisted in their assembly and Fiat pilots tested them before official handover to the SAF. The fifty aircraft were distributed within three squadrons. Two, operating the fighter version, were based at Damascus-Mezze and Sahl Sahra, and the trainers were grouped at Aleppo, home to the central flying school.¹⁴⁴ Upon the completion of the Fiat G55 deal by December 1950, with the combat squadron numbering some forty-eight aircraft, twelve were transferred to the central flying school and formed the first operational training unit squadron in the SAF. Having acquired a single Fiat G-12 transport aircraft in late 1949, the SAF negotiated during the summer of 1953

¹⁴¹ 'Intelligence summaries 108 & 118', 19 May & 29 July 1949, IDFA 673-535-2004

¹⁴² Frank McMeiken, *Italian Military Aircraft* (Leicester: Midland Counties Publications, 1984), pp. 165-67.

¹⁴³ 'Intelligence summary no. 164', 19 October 1950, IDFA 673-535-2004

¹⁴⁴ 'Intelligence summary no. 190', 17 May 1953, IDFA 673-535-2004

¹⁴⁴ 'Intelligence summary no. 147', 22 February 1950 & no. 174, October 1951, IDFA 673-535-2004

with the Egyptian airline SAIDE for the purchase of two Fiat G-212CP transport aircraft, the civilianized version of the G-12. Though offered at a cheap price, the deal did not take place as the G-212 was found to be less capable than the C-47 Dakota, several of which were already in civil and military use by Syria.

By the summer of 1954, when all G55s were in use by the central flying school as advanced trainers, the situation had become intolerable as all twelve Fiat G55 (nine G55AM single seater and three G55BM trainers) were declared unserviceable due to a variety of technical deficiencies. The primary problem was the Daimler-Benz engines which were no longer manufactured and lacked a regular flow of spare parts. Arguments between the SAF and Fiat regarding the cost involved in bringing the latter's experts to Syria to rectify the problems forced the SAF to dispatch a number of operational G59s to the central flying school and discard them as combat aircraft, thus avoiding extending the delays already caused to graduates of the OTU.¹⁴⁵ In the end the SAF solved the problem by purchasing Rolls Royce Merlin to replace the Daimler-Benz engines, with Fiat paying the Syrian force \$68,000 in compensation.¹⁴⁶

Apart from aircraft, the entire SAF anti aircraft guns inventory consisted of Italian supplied weapons. The majority (45) were Hispano Suiza (HS) 23mm single-barrel guns, but the Italians also supplied 15 tri-barrelled HS Oerlikon 20mm guns and a small number of Isotta-Fraschini light 20mm guns. All had similar ranges (up to 4,000 meters) and were positioned

¹⁴⁵ 'Intelligence report for the months August-October 1954', IDFA 673-535-2004

¹⁴⁶ 'Intelligence summary no. 159', 21 June 1950, IDFA 673-535-2004

along the borders with Israel, Iraq and Turkey, and around the major cities, air bases and army camps.¹⁴⁷

The Meteor Deal

As the Palestine war drew to a close it became apparent that the SAF would have to move to the jet age. The Egyptian air force became the first Middle Eastern air force to acquire jet fighters, buying Gloster Meteor and de-Havilland Vampire aircraft, and was closely followed by Iraq which also bought Vampires. On 27 October 1949 the first two Meteors landed in Cairo, and in December 1950 deliveries of the Vampire ensued.¹⁴⁸ Israel had also shown interest, though its first contract for Meteors was finalized as late as 1953. Since Italy, already a military aircraft supplier of Syria did not produce modern jet aircraft at that time, and the US was not yet willing to lift the embargo on arms sales to the Middle East, the only potential sources were France and Britain. The short honeymoon with London produced two significant arms deals for the SAF. In October 1949 the Syrian government approached Britain with a request for the sale of twelve Meteor F-8 and two T-7 fighter and training aircraft respectively, only to meet two major obstacles.

The first was the Syrian difficulty in establishing a credit line of £187,160 for the aircraft vis-à-vis Gloster Aircraft Company (GAC), and a credit line of £30,390 for the engines (supplied separately by Rolls-Royce). Efforts to solve the problem caused a delay in completing the construction of the aircraft as GAC refused to continue work before the credit issue was settled.

¹⁴⁷ 'Syrian Order-of-Battle Estimate', 1 January, 5 May 1953, IDFA 233-573-1956

¹⁴⁸ Nordeen and Nicolle, Phoenix over the Nile: A History of Egyptian Air Power (Washington DC: Smithsonian Institute, 1996), p. 126.

The problem was finally settled when in March 1950 the Syrian Finance Ministry paid the required sum followed on 1 January 1951 by a second instalment of £282,240 for GAC, and £25,844 for Rolls-Royce.¹⁴⁹

The second obstacle was the on-and-off threat of a British embargo on arms sales to Middle- Eastern countries. The deal was signed between the Syrian government and the GAC, but it had to be reaffirmed by the British government, which would then issue the required export licenses. The company, however, had received no assurance that this would be the case making the financial issue the easier of the two problems as the embargo would become the main obstacle the Syrians would have to contend with in the saga of the Meteor acquisition.

Four months after settling the funding problem, the British government announced its intention to stop the sale of arms to non-Atlantic Treaty countries because of what it called 'review of the rearmament programme'.¹⁵⁰ In the meantime, the Meteors for Syria were already built and parked in Britain awaiting delivery. There was also a third reason, unknown to the Syrians, for delaying the already paid for aircraft: London sought to gain political influence by 'playing' the Meteor card.

In the spring of 1950 Foreign Secretary Ernst Bevin directed the Foreign Office to delay the granting of export licenses. When Syrian-Israeli clashes erupted along the demilitarized zones in early 1951, Damascus urged London to lift the embargo on the fourteen Meteor aircraft still stranded in Britain, hoping to rely on the latter's sympathy towards Syria and the growing

¹⁴⁹ 'Intelligence summary no. 149', 16 March 1950, IDFA 673-535-2004

¹⁵⁰ 'Intelligence summary no. 164', 19 October 1950, IDFA 673-535-2004

anti-British sentiments among Syrians who accused London of weakening them in the ongoing conflict with Israel.¹⁵¹

On 29 November 1950, in reply to a parliamentary question, the British secretary of defence announced that export licenses for the fourteen aircraft would not be granted. This was reaffirmed in another reply on 25 July 1951 following the hostilities in the demilitarized zone. The Syrian government resented this decision, especially in relation to the two Meteor T7 trainers, rightfully claiming that the aircraft had become Syrian property and that the British government had not objected to the training of SAF pilots on British soil. The Syrians at that point considered suing GAC but did not pursue the idea, probably because they were advised that a 'force majeure' clause in the contract would provide a valid defence. They did, however, display a very disgruntled attitude, which Gen. Sir Brian Robertson, C.in C. of the Middle East Land Forces, had to endure when he visited Damascus in February 1951.

The Syrian government, backed by Foreign Office officials, further claimed that the two trainers should be released immediately as they had no fighting potential and thus did not come within the definitions of the arms embargo restrictions. London retorted that it suffered a 'shortage' in aircraft supplies and that such aircraft were 'scarce'. Politically, Whitehall linked its refusal to release the Syrian aircraft with the refusal to approve similar applications from Israel, Jordan and Lebanon, though this did not deter it from supplying Meteors to Egypt until September 1950. In a draft memorandum from the Foreign Office to Prime Minister Churchill in early 1952 it was argued that:

¹⁵¹ 'Intelligence summary no. 173', 5 July 1951, IDFA 673-535-2004.

The supply of arms is at present one of the most important factors in our relations with the Middle East States and must be taken into account if we are to reassert our position and influence in that area. The case of the two jet trainers has had a political effect out of all proportion to its intrinsic importance. H.M. Minister at Damascus has suggested that we should take advantage of the present strained relations between Syria and Egypt to release these aircraft in an effort to range Syria among those Arab States who, in spite of Egyptian opposition, tend to favour co-operation with the Western Powers. It appears that this opportunity should not be allowed to pass and that the political gain from releasing these aircraft would outweigh the reasons against agreeing to the Syrian request.¹⁵²

On 7 March, at Churchill's request to re-examine the issue, Foreign Secretary Anthony Eden concluded that refusing delivery of the two jet trainers might be considered 'a breach of faith' and that since Britain was holding talks with Israel for the supply of Meteors he was all the more anxious to allay suspicions and the hostility of Israel's 'Arab neighbours'. He therefore recommended that the two aircraft be released to their rightful owners.¹⁵³ Three weeks later Eden informed the State Secretary for Air that 'The Prime Minister is agreed that in view of the exceptional circumstances of this case, these two aircraft should be released.'¹⁵⁴

This bizarre scenario was, however, still far from conclusion. A day later, the Foreign Office sent to the Ministry of Supply a memorandum stating that Eden did not wish the decision to be conveyed to Damascus 'at the moment' due to the politically strained relations between the two countries. It was further noted that while the foreign secretary still wished the Syrians to

¹⁵² P.A. Rhodes to Premier Churchill, 29 January 1952, TNA, FO371/98935

¹⁵³ Secretary of State to Prime Minister, 7 March 1952, TNA, FO371/98935

¹⁵⁴ Anthony Eden to Secretary of State for Air, F.S 52/27, 27 March 1952, TNA, FO371/98935

obtain their jets, he would have liked to gain the greatest possible advantage from such a decision by bearing them the news at the most appropriate moment. This meant another delay in delivering the two trainers, much to the annoyance of the Syrians, and would have certainly not alleviated the tense relations alluded to by Eden.¹⁵⁵ In July 1952 the British government agreed at last to release the trainers, despite the ongoing embargo that was still in force, but the Syrians expressed their desire to see the last of twelve Meteor F8 fighters released as well. SAF officials talking to their British counterparts stressed that the arrival of trainers without corresponding acceptance of the fighters made no sense. These pressures seemed to have the desired fruit and by the end of the year all fourteen aircraft had arrived in Syria to form the SAF's first jet squadron.

On 3 December 1952 the Meteors were publicly displayed for the first time when they overflew the Syrian army parade in Damascus,¹⁵⁶ albeit at this stage the aircraft were unarmed.¹⁵⁷ As late as 1954 the SAF contemplated the issue of acquiring bomb release equipment for the Meteors as these had arrived from Britain with only internal weapons (cannons and related ammunition) for air defence role. The SAF approached several European suppliers for operational under-wing racks enabling the carriage of a single 500kg bomb, and sets of four racks for training, carrying 20kg bombs under each wing. At the end of December 1952 ten pilots were sent to Britain to train on the Meteor in anticipation of additional deliveries, and to form a nucleus of twenty Meteor pilots in total.¹⁵⁸ One of the pilots was killed in June 1953 with

¹⁵⁵ F.J. Leishman, Foreign Office, to D.C. Humphreys, Ministry of Supply, 28 March 1952, TNA, FO 371/98935

¹⁵⁶ 'Intelligence report no. 186', 22 December 1952, IDFA 673-535-2004

¹⁵⁷ 'Intelligence summary, December 1952', IDFA 673-535-2004

¹⁵⁸ 'Intelligence summary no. 187', 16 February 1953, IDFA 673-535-2004

his British instructor, when their aircraft crashed.¹⁵⁹ The Meteor's first appearance near the Syrian-Israeli border was on 26 March 1954 when several reconnaissance flights were recorded, some even crossing into Israeli territory over the Sea of Galilee.¹⁶⁰

By 1954 the SAF had taken delivery of its first night fighters, six Meteor NF-13s; though a theoretical boost in night fighting capability, these planes never really met expectations due to the lack of suitable radar equipment and poor pilot skills. Chronic pilot shortage meant that the SAF failed to achieve optimal utilization of its Meteor fleet given that by 1954-55 there were only thirteen qualified Meteor pilots available to man the twenty-three aircraft in service, and only four of them rated on the NF-13 night fighters.¹⁶¹ By early 1954, the SAF had repositioned five Meteors from Damascus-Mezze to Aleppo for storage due to the acute pilot shortage. The aircraft remained there for a year before returning to their squadron at Damascus-Mezze as more qualified pilots returned from training in Britain. An important outcome of the Meteor NF-13 acquisition were the initial steps to establish a comprehensive radar network system, as the operation of night interceptors without the appropriate radar stations network would have rendered them useless. Coinciding with the Meteor deliveries, contracts were signed with Marconi and International Aeradio (IAL) for the acquisition, installation and training of radar and electronics stations and repair shops.

In January 1955 three SAF officers graduated from the Armee de l'Air radar school in Dijon, France, albeit as long as the NF-13s were not equipped with radars, this was of little

¹⁵⁹ 'Intelligence summary no. 191', 5 July 1953, IDFA 673-535-2004

¹⁶⁰ 'Summary of operational intelligence', March 1954, IDFA 679-535-2004

¹⁶¹ 'Intelligence summary for 1954-56', MD586.54, IDFA 687-535-2004

value. A decision to add photo reconnaissance platforms resulted in a contract signed with GAC in January 1956 for the supply of two PR-9 aircraft for low altitude photography.¹⁶²

Serving as a front line fighter for a mere four years, the Meteor will be remembered in SAF service for two anecdotes: the downing of an RAF Canberra during the Suez crisis (see below) and the meteoric rise to power of one of its pilots, Hafez al-Assad, a future SAF C.in C., Minister of Defence, and President. Assad was assigned to the First Squadron in early 1956 when tasked to locate an RAF Canberra photo reconnaissance aircraft that overflew Syria from east to west for intelligence gathering purposes. Assad opened fire on the Canberra but missed and, upon realizing that his aircraft almost ran out of fuel, decided to land at Aleppo air base that had no runway lighting and was difficult to locate at night. Aware that his aircraft's brakes were not functioning but having no choice despite unfavourable strong tail wind, Assad veered off the runway into an adjacent field and made a belly landing causing the Meteor major damage. Though it was the duty of the First Squadron commander to recall Assad from his mission and ensure that he did not find himself in such a precarious situation, the pilot was blamed for the incident, fined and reprimanded by a military court.¹⁶³

¹⁶² 'Intelligence Report', 15 March 1956, IDFA 677-535-2004

¹⁶³ Seale, Asad: the Struggle for the Middle East (London: Tauris, 1988), p. 53

Table 5 – Meteor Deliveries

Model	Purpose	Total no.	Delivered
T7	Training	2	8 November 1952
F8	Day-fighter	12	December 1949 -December 1952
		5	March 1953
		7	March-June 1956
NF13	Night-fighter	6	June-July 1954
PR9	Photo-reconnaissance	2	April 1956
Total		34	1949-1956

Source: Intelligence summary no. 186, 22 December 1952, IDFA 673-535-2004

The end of 1956 saw the delivery of the last of thirty-four aircraft. All available aircraft (ranging at any given time from twenty to twenty-six operational aircraft due to the loss of six planes, and others undergoing maintenance) were grouped into the First Squadron operating from Damascus-Mezze, a situation that was far from ideal given the wide ranging roles of the four different models. The Meteor F8 were allocated to day interception and close support roles, using for the latter bombs and rockets, while the T7 and PR9 models (four aircraft) had no combat value and were used for training and photo reconnaissance missions respectively. The model NF13, destined to be optimized for night interception could not be used in that role due to lack of a country-wide radar network and limited number of qualified air crews available. With the delivery of MiG-15 and 17 aircraft in large numbers from 1956-57 onward, the Meteor became gradually obsolete, and most of the thirty pilots assigned to the squadron were sent to Eastern Europe to train on the new Soviet aircraft.

Further interactions with London

In late 1949 the SAF was offered 50 Hawker Tempest fighter aircraft by the manufacturer without having obtained official consent as the embargo was still in force. The Tempest was superior to both the G-55 and G-59, already acquired by the SAF: it was faster, had a longer range and was better armed. However, the offer did not materialize since the SAF could not afford to operate a third type of fighter alongside both Fiats and would have caused difficulties in training pilots on a small fleet of varied aircraft types.¹⁶⁴

Mutual efforts by both the Syrian government and British aircraft manufacturers to resume talks on the acquisition of aircraft following the successful 1949 Meteor deal were delayed by the reimposition of an arms embargo on Middle Eastern countries in the summer of 1950 following the outbreak of the Korean war and demands in parliament to stop deliveries of arms to non-NATO states.¹⁶⁵ Following the still-born Beaufighter deal, another twin-engine piston bomber was evaluated, the highly successful de-Havilland DH-98 Mosquito. The SAF was offered fifty such aircraft in 1953 at a bargain price of £2000 each. Over ninety such aircraft were sold to the IAF, which deployed them successfully during the 1956 Suez campaign, but the SAF declined the attractive though unrealistic offer, being unable to absorb such a large number of aircraft.¹⁶⁶

In contrast to its indifference to the above deal, the SAF showed interest in acquiring Spitfires as early as the beginning of 1951 following General Robertson's visit to Syria. During the visit the Syrians, disappointed with the poor performance and reliability of the Fiat fighters,

¹⁶⁴ 'Intelligence summary no. 142', 19 January 1950, IDFA 69-3800137-1951

¹⁶⁵ 'Intelligence summary no. 162', 31 July 1950, IDFA 673-535-2004

¹⁶⁶ 'Intelligence summary no. 193', 30 August 1953, IDFA 673-535-2004

expressed their desire to add the reliable Spitfire as a stop-gap measure until the transition to the Meteor jets was complete.¹⁶⁷ Having obtained the Foreign Office's consent, in August 1952 the Air Ministry and Vickers Armstrong offered the SAF forty Spitfire Mk 22/24 aircraft. An agreement for the sale of a mere twenty Spitfire Mk 22 piston engine fighter aircraft was signed on 26 January 1953 with Vickers-Armstrong.

An initial group of pilot candidates was drafted from existing Fiat squadrons. The Spitfires were overhauled and refurbished by Airwork General Trading at London-Gatwick, and re-fitted with Swiss Hispano Suiza 20mm guns. Delivery was completed within a year, from August 1953 to August 1954. A proposal by the Royal Rhodesian Air Force, in March 1955, to supply seven aircraft at £1,200 each, plus £2,000 for spares, did not materialize.¹⁶⁸ By that time Syria had moved away from Britain in the hope of obtaining Soviet supplied aircraft rather than expanding its Spitfire inventory. The fast transition to the jet era, with the prospect of obtaining advanced Soviet aircraft was another reason for the SAF expressing no interest in additional Spitfires, several of which had already seen early retirement, leaving none in service barely six years after their delivery.

The Spitfires formed the Third Squadron operating from Damascus-Mezze. Their main task was to perform counter-insurgency operations within Syria, taking advantage of its relatively low speed and optimal strafing capabilities at low altitude. With the shifting of SAF responsibilities from counter-insurgency to defending the country against the IAF, the Spitfire's low and slow flying qualities soon became a disadvantage.

¹⁶⁷ Foreign Office to L.C.J. Orchard, Ministry of Supply, EY1192/30, 19 February 1951, TNAFO 371/91865

¹⁶⁸ 'Intelligence summary no. 191', 5 July 1953, IDFA 673-535-2004. See also Terbeck Helmut et. al. Spitfire International, p. 383.

Table 6 – Spitfire Deliveries

Model	Purpose	Total no.	Delivered
F22	Day fighter	5	August-October 1953
F22	Day fighter	15	January-August 1954

Table 7 – Number of Losses and Operational Aircraft in Service¹⁶⁹

Year	Spitfire		Meteor	
	Lost in accidents	In operational service	Lost in accidents	In operational service
1952	-	-	-	14
1953	-	5	-	15
1954	-	20	-	15
1955	1	15	1	20
1956	1	14	2	20
1957	-	13	3	20
1958	-	12	-	20
1959	-	8	-	20
1960	-	-	-	15
1961	-	-	-	15
1962	-	-	-	15

The SAF's relatively short flirtation with Britain came to a gradual halt following the 1956 Suez crisis. Apart from increasingly coming under the sway of the charismatic Nasser and his 'anti-imperialist' and 'anti-colonialist' propaganda, the Syrian shift towards Moscow

¹⁶⁹ The number of operational aircraft is not necessarily derived from the number delivered minus the number lost in accidents. It also reflects the number of aircraft withdrawn from use due to technical condition. The remaining Spitfires were dispersed from 1957 around the various air bases as dummies, as were the remaining Meteors from 1958 onwards.

stemmed from its almost unrestricted willingness to supply the most advanced weaponry available, something that London was never prepared to do. The deep differences between the Foreign Office and other branches of the British government regarding the sale of arms to Syria, the Ministry of Defence in particular, was vividly reflected in the chaotic correspondence between the Damascus embassy and London. As the air attaché in Damascus, Lt. Col. G. R. Heyland, put it in an urgent letter to the Air Ministry in Whitehall:

After all my hard work over the past three years to persuade the Syrian Government to purchase British aircraft and to adopt British standards of training, now in our hour of victory, having provided Chipmunks, Spitfires, Meteors and possibly Harvards, through Air Ministry, and having provided for 64 courses with Air Ministry during 1954, it looks as if the Syrian Government, having been thwarted by us, will turn to other countries, which means we shall lose all the political kudos which I have been at pains to try and obtain... The sands and patience of the Syrians, are fast running out and I think that a firm decision one way or the other will be made by the Syrian Government before the end of January.¹⁷⁰

When in December 1955 the SAF asked for additional Meteor aircraft the British ambassador, Sir John Gardner, expressed the hope that 'the Egyptian arms deal with Czechoslovakia and the Syrian-Egyptian Military Pact will not prevent us from continuing to sell small numbers of jet aircraft to Syria'. The ambassador expressed his somewhat far-fetched desire that London would be able to fend off the shifting tide towards the eastern bloc and to compete with possible future arms deliveries from France by advising that: 'If there is some prospect of taking a more

¹⁷⁰ Lt. Col. G.R. Heyland, British Military Attaché in Damascus, to the Air Ministry, 5 January 1954, TNA, AIR2/12126.

generous view of future Syrian requests for arms in order to make a Communist offer less attractive, I would strongly urge that our existing connexion [sic] with the Syrian Air Force should not be overlooked. French influence in the Syrian Army has not always worked to our advantage and, if this is now to be increased by arms deliveries from France, we should in my view, try to offset this by insisting on an equally free hand with the Syrian Air Force'.¹⁷¹

The ambassador's concerns for renewed French influence within Syria's military establishment were not groundless. On 15 July 1954 Israel and France signed a letter of intent for the supply of an initial number of six Dassault Mystere II out of an envisaged thirty aircraft deal, including the more advanced Mystere IVA model. Final agreement was signed on 19 August with deliveries were due to commence by early 1955.¹⁷² Facing this development the SAF realized that it would have to enhance its swept-wing fighter aircraft inventory as soon as possible as its Meteors became increasingly obsolete. The aircraft sought by the SAF was the Hawker Hunter, which was superior to the Mystere, and the equivalent of the Super-Mystere (which Israel had received since 1958) and the Soviet MiG-17.

Britain introduced Hunter aircraft into the Middle East theatre in 1956-57, and in early 1957 started negotiations with Iraq for the supply of a small number of aircraft. This was closely followed by Lebanon, with the two countries eventually procuring sixteen and six aircraft respectively. These token arms packages, meagre by comparison with the forthcoming avalanche of deliveries from the US, France and the Soviet Union, were significant in that the Hunters were

¹⁷¹ Sir John Gardener, British Ambassador to Syria, to the Foreign Office and Whitehall, 4 November 1955, TNA, AIR19/800.

¹⁷² Yitzhak Steigmann, From the War of Independence to Operation Kadesh 1949-1956 (Tel Aviv: IAF Air History Branch, 1990; Hebrew), p. 132.

considered particularly reliable, popular among pilots and advanced in performance and capabilities.¹⁷³

Syria tentatively enquired in early 1956 whether Britain was willing to supply the Hunter, having already learnt that Israel began to take delivery of French Mysteres. The British embassy in Damascus relayed the request, emanating directly from the SAF's C. in C. Greatly concerned by the growing Soviet penetration of Syria, Ambassador Gardner pointed to the political advantages of selling Hunters to the SAF given that 'the continuing loyalty of the Syrian Air Force to the British link, which is inexplicable in the present circumstances, is one of the few encouraging points in the present situation in Syria'; to which the head of the Levant Department replied that the ambassador should not encourage the Syrians to believe that their request would be met since

- (a) We have not sold swept-wing fighters to any state in the area and the sale of Hunters would be, in fact, a very striking gesture;
- (b) Our policy is one of great restraint and a striking gesture would go clean against it;
- (c) We have no particular reason to give the present Syrian government preferential treatment and,
- (d) The supply of aircraft can hardly be justified, in all the circumstances, on the grounds that they are a real and urgent need'.¹⁷⁴

¹⁷³ Francis K. Mason, Hawker Hunter (Cambridge: Patrick Stephens, 1981), p. 100.

¹⁷⁴ Sir Gardener to E.M. Rose, Levant Dept., 14 May 1956, TNA, FO 371/121882

Other sources of supply

While the British lukewarm to Syria's military needs pushed Damascus to intensify its search for alternative aircraft suppliers in 1953-55, none of these efforts bore the desired fruit with London remaining Damascus's main supplier of hardware and training till the Syrian shift to the Soviet Union in the latter half of the 1950s.

Consider, for example, Franco-Syrian procurement relations. A couple of years before becoming the IAF's major supplier of modern combat aircraft, Paris approached the SAF in the hope of concluding deals based on the two countries' historical ties. The aircraft offered was the MD-450 Ouragan built by Avions Marcel Dassault. Though almost identical in performance to the Meteor, which was only marginally faster and had slightly more range, the Ouragan's advantage was in its weapons carrying capability. Compared to the Meteor's four 20mm cannons and limited ability to launch under-wing small calibre rockets, the Ouragan could carry the same weaponry and payload while adding two 250kg bombs, which gave it an advantage over the Meteor in the air-to-ground attack role. In the spring of 1951, with London withholding the delivery of Meteor aircraft already paid for by Damascus, France agreed to sell the SAF the same number of aircraft ordered from Britain, namely twelve Ouragans and two trainers (the Ouragan lacked a two-seat training model, and it is not clear to which training aircraft the French referred to). A British official commented in this respect: 'The 14 aircraft now ordered in France are almost certainly intended to take the place of those originally ordered from Glosters'.¹⁷⁵

¹⁷⁵ G.W. Furlonge to Burrows of the British Embassy in Washington, 29 May 1951, TNA, FO371/C376558

This assessment was echoed by the Head of the British Legation in Damascus who reported to London that Shishakli was determined to seek replacement aircraft elsewhere, if the British continued to refuse the release of two Meteor T7 trainers held since earlier that year. He also stated that 'it was true that Syria had closer relations with the French, but that was solely for the reason that when Syria asked the French for arms, the latter supplied them'.¹⁷⁶

Whether the Syrians were determined to obtain jet fighters irrespective of their source, or their interest in the Ouragan was merely a clever ploy to increase the pressure on London to release the remaining Meteor aircraft is open to speculation. It is the belief of this author that the SAF's operational and technical capabilities at the time were insufficient for the simultaneous integration of British and French fighters, hence it is likely that the SAF saw the French order as a thinly veiled hint to British decisionmakers of its determination to pursue alternative venues had they carried on with their refusal to release the Meteors. The SAF, expectedly, never materialized the Ouragan offer and by 1952 the stored Meteor aircraft had already reached Syria. France would no longer pursue the Syrians with offers for aircraft acquisition, particularly after the strengthening of Damascus's ties with the eastern bloc.

Likewise, the SAF declined an offer by Swedish Aerospace and Defence Company (SAAB) in August 1953 to acquire twenty-five de-Havilland Vampires from surplus Swedish Air Force stocks, offered at a price of \$50,000 each. The reasons for the decline were two-fold: the complexity of maintaining two types of jet fighters in such small numbers, and the inability to train enough pilots while keeping a reasonable number of pilots qualified on both the Meteor and Vampire, as it was not possible for air crews to be rated on both types simultaneously. Another

¹⁷⁶ Montagu-Pollock to P.A. Rhodes of the Eastern Dept. of the Foreign Office, 4 June 1951, TNA, FO 371/91866/C376558

reason was that the Vampire was at that time considered inferior to the Meteor, which made its acquisition of little value.¹⁷⁷

This, however, failed to dissuade the Swedes, and by the end of that year they had approached the Syrian Government yet again with an offer to sell fifty SAAB-29 fighters, a number later reduced to twenty-five, at the price of \$165,000 each. A similar deal was offered to the IAF but failed to materialize due to the lack of funding after SAAB withdrew its commitment to provide Israel with the required credit. Funding difficulties were also experienced by the SAF, which only had a budget for twelve aircraft outright, despite having been promised credit by the Federal Bank of the Lebanon through associations with Col. Kassem Khalil, the Lebanese military attaché in Damascus. The remaining thirteen aircraft were paid for over a period of three years. The subsequent availability of state-of-the-art fighter aircraft from the Soviet Union sealed any chance of realizing the Swedish offer.¹⁷⁸

Training

The training doctrine and basic principles in the aftermath of the Palestine war were not radically changed from those adopted during the first two years of the SAF's existence. Retaining the basic training syllabus, they continued to rely on the assortment of light planes procured prior to the war for the provision of ab-initio flight training at the central flying school that opened in 1949 and where all pilot training activities were transferred to from Damascus-Mezze. The selection process of pilot cadets was altered in that the previous policy of selecting officers and NCOs from the Homs military academy graduates was found to be too lengthy and

¹⁷⁷ 'Intelligence summary no. 193', 30 August 1953, IDFA 673-535-2004

¹⁷⁸ G.R. Heyland to the Air Ministry, 5 January 1954, TNA, AIR2/12126, p. 131.

cumbersome. The officers arrived at the central flying school after two years of studying at the academy, and had to spend at least six additional months there. Therefore the SAF had to wait two-and-a-half years for a candidate to complete his military and flying studies. Since most of the NCOs' training and education levels were found to be unsatisfactory it was decided at the end of 1950 that pilot cadets would be required to undergo basic soldiering training for six months, holding the rank of private, then attend one year at the Homs academy to qualify for officer rank and only then be accepted to the central flying school for training. Yet the selection process had only limited success.

By the mid-1950's only three out of one hundred candidates (0.03%) passed the preliminary selection examinations. As far as training aircraft were concerned, purpose-built combat aircraft were added including for the first time, two-seat fighter aircraft of models identical to the single seat fighters purchased from Italy and Britain in 1949-51. This enabled pilots to train on the same aircraft types that they would later use in combat. It was the first time that the SAF operated training aircraft for other than the ground attack role, as the Fiat, Spitfire and Meteor, the principal combat aircraft in use, were primarily intended for the air superiority role, and the task of instructing SAF pilots, whose only previous combat experience had been flying the combat-limited Harvards in air-to-air combat missions necessitated the indoctrination of new tactics, and the acquisition of suitable equipment for the new role. The SAF itself had only a limited number of local experienced instructors and its reliance on foreigners continued unabated throughout the period, with pilots being sent regularly to training institutions outside Syria, primarily to Britain, Italy, Egypt and Iraq.

By the end of August 1949, the primary training aircraft fleet had been enhanced by the acquisition of three additional de-Havilland DH-82A Tiger Moth aircraft from British civilian sources. The deal, valued at £2,250, was the last for that type of aircraft prior to acquiring the more advanced Chipmunk.¹⁷⁹ Also acquired during 1949, from an undisclosed source, was a pair of Airspeed AS-40 Oxford multi-engine and navigational trainers. These aircraft, however, suffered from chronic engine malfunctions and their serviceability rate throughout the years was very low.¹⁸⁰

At the end of 1951 Captain Hassan Zanun, seconded from the IrAF, became commander of the central flying school. Zanun, an Iraqi national, had volunteered to serve in the SAF in May 1948 and was considered an experienced combat pilot. He was assisted by the chief instructor for basic training, Captain Yakuts Salem Muhammad, seconded from the REAF who joined the SAF in September 1947 and had considerable training experience. In late 1949 the Minister of Defence, Abdullah Attfah, visited London to discuss the replacement of the motley collection of training aircraft with newer equipment. His visit resulted in the acquisition of de-Havilland DHC-1 Chipmunk, second-generation ab-initio training aircraft.¹⁸¹

Advanced pilot training was under the responsibility of Captain Muqabri who was sent to France in 1949 to attend an advanced flying training course, and Lt. Walter Weiss, a World War Two Luftwaffe pilot who served in the SAF since 1948. Those Syrian pilots who had been sent abroad to train with such prestige institutions as the RAF and the Italian Air Force, had no doubt an advantage over pilots who graduated from the central flying school. However, the varying

¹⁷⁹ 'Intelligence summary no. 124', 9 September 1949, IDFA 51-782-1965

¹⁸⁰ 'Intelligence summary no. 131', 28 October 1949, IDFA 51-782-1965

¹⁸¹ 'Intelligence summary no. 138', 21 December 1949, IDFA 51-782-1965

methods and concepts employed by the four very different air forces prevented the SAF from consolidating a coherent corps of air crews operating as a team. This resulted in the creation of a two-tier qualitative system, under which the British- and Italian-trained pilots had the upper hand over their colleagues who were sent to train in Egypt or Iraq. It must be kept in mind, however, that the decision to train SAF pilots in Arab countries was sometimes motivated by political rather than professional considerations. This two-tier system meant that British- and Italian-trained pilots found themselves in the combat squadrons while Arab-trained pilots were relegated to the less prestigious transport and communications squadron. Even those who trained with the central flying school by mostly British, French and Germans, underwent varying methods of training. The course lasted an average fifteen months, and had three phases: indoctrination of ab-initio (basic) piloting skills; solo flights on Tiger-Moth and Fiat G46 aircraft; and combat training on the Harvards.

Up to 1950 graduating pilots were sent abroad to complete their operational training. From that year onwards an Operational Training Unit (OTU) squadron was formed at the central flying school with dedicated Fiat G55/G59 aircraft, ten and two respectively. Low serviceability levels meant that only a few were constantly available causing the training program to miss planned schedules. Yet the limited availability of Harvard advanced trainers by 1954 (only seven aircraft in use prior to the acquisition of more from Rhodesia), necessitated the dispatch of eleven pilots to train in Britain on RAF Harvards, before progressing to the Meteor jets.¹⁸²

By mid-1949, fifteen pilots had been sent abroad to Egypt, France, Britain and the US; this concurred with the third basic course at the central flying school commencing in March

¹⁸² 'Air Intelligence Review', August 1955, IDFA 679-535-2004

1949. Training agreements were concluded with Iraq and Egypt so as to ease the burden on the central flying school, which lagged behind in providing the urgent training requirements. Four pilots and forty ground crews were dispatched to Baghdad in mid-January 1950.¹⁸³ Seven pilots were sent to Cairo to train on the Fiat G-55 aircraft used by the REAF.¹⁸⁴ In addition, air and ground crews and mechanics attended training schools in the US and Italy. Initially, a group of ten pilots were sent to Italy, where they received three months of training on the Fiat G-59 aircraft (April-July 1950). An additional group of ten pilots began training in Italy during that month. Eight of those pilots remained in Italy for over a year, gaining considerable experience in flying high-speed combat aircraft such as the P-51 Mustang, an aircraft considerably more advanced than the Fiats. At least five mechanics and radio operators were sent to the US. In June 1951 SAF cadets were sent to the REAF to train on their Meteor jet fighters. The training mission to Iraq, where trainees were expected to spend two years studying with the IrAF training academy, was forced to return to Damascus at the end of April 1950 because of political tension between the two countries.¹⁸⁵

On 10 May 1950, the third basic pilot graduation ceremony took place at the central flying school. The completion of the fourteen-month long flying course was celebrated in the presence of the C.in C. of the army and senior SAF officers. Fifteen cadets had their wings pinned to their uniforms by the SAF commander, Col. Nasser, after which they took off in formation with some of their instructors, demonstrating various aerobatic manoeuvres in their newly delivered advanced Italian Fiat trainers. During the display two Fiat G46 aircraft collided,

¹⁸³ 'Intelligence summary no. 143', 24 January 1950, IDFA 673-535-2004

¹⁸⁴ 'Intelligence summary no. 150', 28 March 1950, IDFA 673-535-2004

¹⁸⁵ 'Intelligence summary no. 153', 4 May 1950, IDFA 673-535-2004

and one of them crashed killing the course's chief instructor, 2nd Lt. Kemal Shihabi. This was the second loss of a Fiat G46 trainer; the first occurred southeast of Damascus in December 1949. This unfortunate event, however, did not interrupt the ceremony, which was concluded with a speech by the Aleppo air base commander who hailed the SAF's achievements during the war and the courage of the fallen airmen.¹⁸⁶

While the new pilots were sent to the First Squadron flying Harvards, most 1948-era Harvard pilots were selected to train in Britain and the first group of twelve candidates left for London in early June 1950 to train on the Meteor jets.¹⁸⁷ They were joined two weeks later by a group of mechanics for training on the aircraft's systems and engines.¹⁸⁸ Despite the reliance on foreign training of aircraft mechanics the SAF opened its own mechanics school at Aleppo in early 1951 after ten months of preparations. The first course included thirty-three mechanics holding the rank of sergeant. The instructors' cadre comprised two officers and three NCOs.¹⁸⁹ Following the acquisition of a number of radar stations from Britain, a radar training school was opened at the Katana camp under the command of Captain Sadeq Ghailani with the assistance of two German radar experts. The school accepted NCOs with the rank of Staff Sergeant and above who would graduate after a year's study and be able to command a radar station for the purpose of identifying intruding aircraft and directing interceptors towards them. Since the school was under the auspices of the army and not the air force, the graduates did not possess the ability to cooperate between land and air forces in the complicated task of enemy aircraft interception. They were proficient in the defensive but not offensive doctrine of radar operation. As noted,

¹⁸⁶ 'Intelligence summary no. 158', 13 June 1950, IDFA 673-535-2004

¹⁸⁷ 'Intelligence summary no. 155', 16 May 1950, IDFA 673-535-2004

¹⁸⁸ 'Intelligence summary no. 157', 1 June 1950, IDFA 673-535-2004

¹⁸⁹ 'Intelligence summary no. 169', 9 March 1951, IDFA 673-535-2004

Ghailani had graduated from the French Air Force radar school where he also mastered the use of ground to air communication, an inherent requirement for radar operators.¹⁹⁰

A fourth basic pilot graduation class completed their flying training on 25 November 1950. The fourteen new pilots were sent to the Fourth Squadron in Aleppo to become the first group of graduates to train on the newly delivered Fiat G59. Their OTU was accompanied by an Italian instructor.¹⁹¹ In an effort to consolidate its basic training aircraft fleet and dispose of older types the SAF evaluated a number of modern training aircraft, including the US built Beechcraft B45 'Mentor' which was displayed in Damascus during the summer of 1950. Far more advanced than the Chipmunk, the B45 was rejected exactly because of that reason being equipped with a retractable undercarriage and too complicated to be considered a primary trainer. The SAF eventually selected the British built de-Havilland DHC-1B Chipmunk primary trainer and placed an order for fifteen aircraft in July 1952. The first two were delivered to the central flying school on 15 November of that year. A second contract for sixteen aircraft was signed in 1954 with aircraft deliveries taking place between February and September 1955. At the height of its operation, the SAF had thirty Chipmunks and could begin removing the Piper Cub and Percival Proctor aircraft from the ab-initio training syllabus, and transfer them to the newly established communications squadron.

From 1953 onwards the syllabus consisted of primary training on the Tiger-Moth and advanced training on the Chipmunk, reducing the number of ab-initio trainer types from three to

¹⁹⁰ 'Intelligence summary no. 165', 10 November 1950, IDFA 673-535-2004

¹⁹¹ 'Intelligence summary no. 167', 31 December 1950, IDFA 673-535-2004

two.¹⁹² The diversity of training sources, and the intense training undertaken by the SAF from the end of the Palestine war to the Suez crisis, did little to improve the force's operational capability. The sorry state of the SAF was starkly illustrated by the comments of foreign observers at the air display of 18 July 1952, consisting of ground strafing and bombing of targets and aerobatic and formation flights by nineteen Fiat G59A fighters and four Fiat G46 trainers from the Second Squadron at Damascus-Mezze. Commenting on the ground strafing of targets (using the aircraft's 20mm cannons), the military attaché at the British embassy in Damascus, Lt. Col. G.R. Heyland, commented that 'the shooting varied considerably with individual pilots and ranged from very good indeed to bloody awful. In fact at one time we all wondered whether we would get away with our lives'. He was similarly scathing of the bombing demonstration (with half-a-ton bombs) noting that a mere one third of the bombs fell in the target area, and he derided the aerobatic part of the show as 'an average display of loops and rolls which I imagine any normal British pilot could do blindfolded', contrasting it with the 'first-class display of aerobatics... put on by two German instructors who flew in from Fighter School at Aleppo'.

Though impressed by the tight formation flying that ended the display, Heyland concluded that 'by British standards the display was poor and the organization with time lags between events was even worse!', cynically adding that 'all the aeroplanes at least went up and came down without a casualty which was probably somewhat of an achievement'.¹⁹³

A similar opinion was expressed by the only remaining British instructor in the Syrian army, Henderson, who in conversation with Heyland described the situation as hopeless. Loaned

¹⁹² 'Arms for Syria', extract from a conversation between Ross of the Foreign Office Eastern Dept. and M. Luc of the Quai d'Orsay, 8 July 1952, TNA FO 371/98932

¹⁹³ G.R. Heyland to the War Office, Whitehall, 24 July 1952, TNA, AIR20/6986

by GAC to the Syrian government for the purpose of training on the Meteors, Henderson said that he had found his job ‘dispiriting’ as most SAF officers appeared to be apathetic about their trainees, and most of the trainees themselves showed little enthusiasm for flying.¹⁹⁴

The operational conversion unit (OCU) course he taught dwindled from twenty to ten pilots and they were to be placed with the Fiat and Spitfire units. Thus the SAF would have been in a difficult position to man the newly delivered Meteors. Henderson commented that the delivered Meteors seemed to remain on the ground most of the time because of both the cost of operating them and the pilots’ half-hearted attitude to flying. He further commented that in his opinion the SAF would fail in its efforts to build a modern and efficient striking power unless ‘they use mercenary pilots’.¹⁹⁵ The acquisition of British modern jet fighters required an outstanding effort to train enough qualified pilots so that a fully operational squadron could be formed. The feeble state of SAF pilots during the first half of the decade was likely attributed to poor personal character and educational level of the cadets. It was also due to a low level of training aircraft serviceability, a wide diversity of training institutions, methods and instructors and the absence of an overall cohesive training system.¹⁹⁶

An enhanced training syllabus was devised by the German instructors at the end of 1951 consolidating the various phases of pilot training into a three-part program. The first included sending candidates to an officers’ course at the Homs academy after which they would enter the second phase at the central flying school completing forty hours of ab-initio flying on the Piper

¹⁹⁴ Ibid.

¹⁹⁵ British Legation in Damascus to E.M Rose., Levant Dept., Foreign Office, Whitehall, 30 April 1956, TNA, FO 371/121880

¹⁹⁶ ‘Intelligence summary no. 175’, 25 October 1951, IDFA 673-535-2004

Cub and Tiger-Moth before progressing to 180 hours of theoretical ground school studies. This would take some three months to complete after which the cadet would join the advanced training phase comprising forty hours on the Fiat G46 and twenty hours on the Harvard. The theoretical studies at this stage combined 170 hours and included aerodynamics, navigation, avionics and radio communication. This phase lasted three months, and once completed the cadet was ready to gain his wings, eventually qualifying as a fighter pilot.

The next phase included 100 hours on the Fiat G55, both single and two-seater aircraft and G59 two-seaters. The pilot had to display aerobatic skills, formation flight and air combat tactics. Those who did not qualify as fighter pilots were sent to Damascus-Mezze where they flew 120 hours (including twenty hours of instrument flight) on Dakota and Junkers Ju-52 aircraft. The theoretical part of the course, which covered sixty flying hours, included the study of overseas air transport regulations as set by ICAO, so as to allow operations along international airways and acquire the required professional abilities such as instrument navigation and English language proficiency. This was a very intensive program, lasting some ten months, and reflected the SAF's urgent need to produce new pilots as the air force had grown in numbers and tasks. This syllabus was in use until the transition to a Soviet doctrine from 1955 onwards.¹⁹⁷ The adoption of the Soviet flying training syllabus and doctrine ushered in a slow but steady era of orderly training, gradually eliminating the haphazard nature of pilot training that was typically characteristic of the years 1950-55.

An example that was typical of the SAF difficulty in establishing a coherent training system could be found in the 1955 flying training program which called for the dispatch of

¹⁹⁷ 'Intelligence summary no. 178', 9 January 1952, IDFA 673-535-2004.

twenty pilots to Britain to fly Harvards and Meteors, three pilots to France for a complete course lasting from October 1954 to October 1956, a single transport pilot to Egypt to gain experience in para-dropping flights, three additional pilots to Egypt to train on the older Fiat and Macchi aircraft and six Spitfire and Meteor pilots to train on Egyptian soil. During 1955 the SAF lost a Spitfire and a Meteor in training accidents in Egypt, and a second Spitfire made a belly landing that took it out of service for a lengthy period.¹⁹⁸

Towards the end of 1957 the central flying school had some thirty serviceable Harvards, half of which were acquired from Rhodesia. Though primarily used for training, the majority of the aircraft had been equipped with machine guns for use in the counter insurgency role, thus providing the pilots with their first baptism of fire.

Foreign advisors

As insinuated by Heyland's above criticism of the Damascus air display, foreign advisors had played an important role in enhancing the SAF's competence, hence their dwindling numbers in the wake of the Palestine war could not but adversely affect the force's operational level. Because of Syria's dire economic situation the SAF was forced to discharge most foreign advisors recruited in 1950; in November alone, sixteen of twenty German experts, six of them serving in the SAF, were forced to leave. The most senior SAF advisor to be dismissed was Major Hartmann Grasser who served at the force's headquarters.¹⁹⁹ Asked by some mercenaries for the reason for their discharge, the SAF justified the move on their alleged poor professional

¹⁹⁸ 'Air Intelligence Review', October 1955, IDFA 679-535-2004

¹⁹⁹ Hartmann Grasser (1914-86) scored 103 Downings of enemy aircraft during the Second World War. He spent the years 1945-49 in Soviet captivity, then moved to Syria to become advisor to the SAF. Ernst Obermeier, Die Ritterkreuztraeger der Luftwaffe 1939-1945 (Berlin: Dieter Hoffmann Verlag, 1966), p. 64.

abilities, raising many eyebrows as they were all WWII veterans and were considered far more professional than their Syrian trainees - the main reason for their recruitment in the first place.

Many former officers, some of them ardent Nazis, had sought refuge in Middle Eastern countries after the war, offering their services to Egypt and Syria. The majority were looking for work to ensure a regular income; some were seeking asylum from prosecution in their homeland for war crimes; others were ideologically motivated to assist the Arabs in their conflict with the Jews. The latter were mainly former SS officers who joined the Syrian security apparatus, with few aviators or mechanics amongst them. The fear of being forced to return to Europe raised tension among the foreigners, who were divided into two rival groups led by colonels Kriebel and Roestel.²⁰⁰

When Roestel spent a holiday in Switzerland during the summer of 1950, not anticipating his dismissal, his rival Kriebel took advantage of the situation and demanded his ousting, charging him with espionage. When Roestel returned in October, an official enquiry revealed administrative flaws in his work affecting various Syrian military projects but there was no evidence of espionage. This incident led Roestel and many of his followers, including SAF top

²⁰⁰ Rainer Kriebel (1908-89), son of a rightist army officer, who rose to prominence in the Nazi party. He took part in the 1923 Beer Hall Putsch attempt by Hitler, then served in the German army from 1926 to 1945 reaching the rank of Oberst (Colonel). In 1944 he joined the Waffen-SS as an intelligence officer, working for the CIA after 1945 before going to Syria with a group of 50 men. Kriebel took active part in the Shishakli coup, and after his dismissal went to Egypt where he became Germany's military attaché. Franz Roestel (born in 1902) was an Oberstleutnant (Lieut.-Col.) in the Wehrmacht, an advisor to the Romanian Army and since 1943, he served as commander of the SS-Panzer Division Frundsberg. He fled to Syria after the war and was advising the Syrian Army during the Palestine War. Hans-Peter Schwarz, Frank-Lothar Kroll, Manfred Nebelin, Adenauer und die Hohen Kommissare (Frankfurt: R. Oldenbourg Wissenschaftsverlag, 1989), p. 610.

advisor Grasser to leave Syria. By mid-1951 only seventeen German advisors remained, seven of them pilots.²⁰¹

The SAF continued to employ German advisors till their presence was no longer necessary. This was due to the massive Soviet assistance obtained after 1955. Despite cooperation accords with the Soviet Union, the SAF repeatedly extended the contracts of foreigners, such as Hans Mohr and Walter Weiss - two highly experienced former Luftwaffe pilots who first came to Syria in late 1948. Both Mohr and Weiss were employed as flight instructors at the central flying school organizing conversion courses on the Fiat G55, and both were also jet instructors though the abrupt cessation of their service after 1955 prevented this from materializing.²⁰² Also prominent was the former Luftwaffe radio expert Gustav Ludwig Korff. Married with two children, Korff resided in Damascus and served at the SAF headquarters. He was involved in testing radio-communication equipment as well as planning the SAF's radar network, the lack of which hindered the ability to effectively confront IDFAF aircraft in air combat.²⁰³

²⁰¹ 'Intelligence report no. 174', 1951, IDFA 673-535-2004

²⁰² Oberleutnant (Captain) Hans Mohr served as a Focke-Wulff FW190 fighter pilot with the Luftwaffe's no. 4/JG-1 fighter squadron since September 1942 and as a technical officer in April 1943. Mohr was shot down by an American aircraft on 16 April 1943 near Westerschelde in the Netherlands. He was bestowed with the Fighter Operational Clasp. His good friend Oberleutnant Walther Weiss flew FW190s with the Luftwaffe nos. 4/JG-5 and 5/JG-5 Squadrons in 1943 and 1944 respectively. Weiss was awarded the Fighter Operational Clasp twice, and had at least four victories to his credit, two Russian fighters, an American Mustang and an American B24 Liberator bomber. Kracker Luftwaffe Pilot Archive, www.Aircrewremembrancesociety.com.

²⁰³ 'German Personalities in the SAF', 1954, IDFA 679-535-2004

Table 8– Development of the Training Aircraft Fleet at the Central flying school (non-Jet)

Year / No. of aircraft in use	Tiger-Moth	Piper Cub	Fairchild Argus	Harvard	Chipmunk	Fiat G46	Fiat G55	Fiat G59	Oxford	Total
1950	8	6	6	11	-	13	2	-	2	48
1952	9	5	4	10	-	9	9	24	-	70
1954	10	4	-	7	15	7	13	2	-	58
1956	-	4	-	20	20	-	11	10	-	65
1958	-	-	-	20	28	-	-	-	-	48

Sources:

- Intel. Summary 158, June 13, 1950 (IDFA 673-535-2004)
- Report on the SAF, March 1954 (IDFA 679-535-2004)

Table 9 – Summary of Flying Courses 1947-1958

Course No.	Duration	Graduating Pilots	Remarks
1	10/1947-2/1948	10	
2	1948-1949	15	
3	2/1949-5/1950	13	
4	1949-11/1950	14	56% success rate (*)
5	5/1950-30/9/1951	5	71% success rate (*)
6	2/1951-31/10/1952	7	35% success rate (*)
7	1/1952-1/1954	9	60% success rate (*)
8	1/1953-12/1954	8	57% success rate (*)
9	1/1954-11/1955	12	57% success rate (*)
10	1955-9/1956	12	
11	1956-1958	10	
12	1957-	?	
Total	1947-1958	123	

Source: Air Intelligence Reports, February 1954, August 1954, IDFA 679-535-2004, 681-535-2004

(*) Success rate = the percentage of graduating pilots vs. number of entrants

Structure and organization

Formation of a Paratroopers Battalion

In 1951 the SAF was tasked with the formation of Syria's first paratroopers unit. Initially it was based at Damascus-Mezze but later moved to Rassem Abbud, some twenty-four miles east of Aleppo. For the purpose of training, the SAF's two Junkers Ju-52 transport aircraft, basically AAC-1 locally built variants of the successful German design, were acquired from France in 1949.²⁰⁴ In late 1952 two SAF officers were sent to France for training with the French military. Upon their return to Syria they recommended the use of the AAC-1, with which they were acquainted during their instruction. The AAC-1 could carry up to seventeen paratroopers and was considered a reliable aircraft, though following the acquisition of Ilyushin IL-14 aircraft from the Soviet Union they were declared surplus in late 1956.

The first local course was opened at the end of February 1952, concentrating initially on theoretical studies as the first shipment of parachutes from France was ordered only as late as July of that year. To accelerate the training, eighteen soldiers were dispatched to the Turkish army camp at Izmir in August, returning in early 1953. By December 1952 a large consignment of sixty parachutes, including forty with automatic deployment mechanism, had arrived from France for use by the first twenty five trained paratroopers who had graduated in early 1954. During August of that year, as part of wider army manoeuvres, the paratroopers' battalion took part for the first time. Paratroopers were dropped from Dakota aircraft in addition to the AAC-1.

²⁰⁴ 'Air intelligence report', August 1954, IDFA 679-535-2004

It took the SAF three additional years to begin the second course with 200 candidates, a quarter of whom finished and were awarded the paratrooper's clasp.²⁰⁵

At the end of 1957 the battalion's strength ranged from thirty to fifty trained fighters. However, their morale and enthusiasm were considered low and SAF HQ doubted whether the force could be effectively used during war. With the tightening of relations with the eastern bloc since the mid-1950s the force was expanded and Soviet instructors were brought in to improve its operational readiness. The syllabus changed to enable the inculcation of Soviet paratroopers' doctrine.

Syrian Arab Airways – A Force Multiplier

Syrian Arab Airways (SAA) was founded on 21 December 1946 with aircraft, crews and technical advice from the US airline Pan American World Airways (Pan-Am), a joint venture that lasted only a few months. Services started in June 1947 between Damascus-Mezze and Aleppo, Deir-ez-Zor and Kamishli using DC-3 Dakota aircraft supplied by Pan-Am, but ceased to operate in May 1948 when Syria became embroiled in war with Israel, with the SAF taking over the fleet a month later.²⁰⁶ The official decree for mobilizing the airline, aircraft and employees, and placing it under SAF control was signed on 12 May 1949 by the Syrian Army General Staff, almost a year after the actual takeover.²⁰⁷

²⁰⁵ 'Intelligence summary no. 181', May 1952, IDFA 679-535-2004

²⁰⁶ R.E.G Davies, A History of the World's Airlines (Oxford: Oxford University Press, 1964), pp. 400-03.

²⁰⁷ 'Intelligence summary no. 108', 19 May 1949, IDFA 675-535-2004

In early July 1949 the airline returned to civilian control under the Transport and Communications Department. This was done with the understanding that the SAF would be jointly consulted in any decision making process, such as aircraft acquisition, since the airline was considered a military reserve force.²⁰⁸ Later that month a once weekly route linking Damascus with Khasjah via Beirut and Aleppo was inaugurated. It was the first time that a secondary Syrian city was connected internationally. Additional services were operated to eastern Jerusalem, Cairo, Kuwait and Doha, with seasonal hajj pilgrimage flights to Saudi Arabia.²⁰⁹

During the summer a couple of de-Havilland DH-89A Rapide light transport aircraft and an AAC-1 were transferred to the airline from the SAF to support its small fleet.²¹⁰ Due to their low serviceability, however, these aircraft were seldom used by Syrian Airways, and were soon returned to the military. The SAF takeover caused repeated friction with the Ministry of Finance, which insisted on sharing the airline's revenues. However, the SAF disagreed since it was responsible for the operation and maintenance of the aircraft arguing that the income should be exclusively channelled to its budget. To put pressure on the civilians the SAF ordered the halt of the Damascus-Aleppo- Khasjah service in December 1949.²¹¹ Not until the summer of 1951 did SA revert to its status as Syria's national carrier, restarting international scheduled regional services to Beirut, Jerusalem, Baghdad and Cairo, in addition to Kuwait and Doha. The domestic network was expanded with daily flights connecting Damascus with Aleppo, Latakia, Kamishli

²⁰⁸ 'Intelligence summary no. 119', 5 July 1949, IDFA 274-3800137-1951

²⁰⁹ Ibid.

²¹⁰ Ibid.

²¹¹ 'Intelligence summary no. 137', 11 December 1949, IDFA 51-782-1965

and Palmyra (Tadmur), and two small Beech D-18S aircraft were added. Even as a civilian airline it maintained close ties with the SAF on a daily basis.

With the development of a modest fleet of purely military transport aircraft within the Third Squadron the SAA fleet was reduced to that of a reserve force, to be mobilized during wartime only. Yet since the technical condition of the Third Squadron aircraft was degraded over the years, the SAA fleet became the only viable transport force and flights for the SAF were frequently operated, albeit struggling to maintain an undisturbed schedule of civilian flights. During 1954 SAA Dakotas were used in para-dropping training sorties to augment the small AAC-1 fleet. SAF pilots were regularly invited to fly on the Dakotas as co-pilots (by the mid-1950s almost all captains were foreigners) in order to accumulate sufficient experience to operate the aircraft independently in case of need.²¹²

Many SAF pilots whose proficiency as combat pilots had deteriorated over the years for various reasons, such as health or degraded performance, were transferred to SAA as transport pilots. These included Munir Jarudy, who completed his flying training in 1954 and became the First Squadron's (Meteor) commander in 1957. He was transferred in 1959 to SAA and flew on the Dakotas. Captain Sai'ah Sahil, born in 1923, a Harvard pilot during the Palestine war, became a Dakota co-pilot following his dismissal from the SAF. Captain Qadsi Faiz, a Fiat pilot since 1950 and later Meteor and MiG-15 pilot, moved to SA in 1958-59. Some pilots went to SA due to political reasons as their loyalty to the regime was questioned; the majority returned to the SAF following their rehabilitation, usually after a regime change. Such was the case of Lt. Muwaffaq Tinnawi, born in 1925, a graduate of the first flying course (1947), an instructor pilot

²¹² 'Annual Intelligence Summary for 1954-56', MD586.54, IDFA 687-535-2004
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and one of the first SAF helicopter pilots. Tinnawi was transferred to SA in 1957, being suspected of distributing 'anti communist propaganda', but was returned to active military service in 1959 for a conversion course in Poland on the newly acquired Ilyushin IL-28 bombers. Similarly, Col. Zaher Aqil, a former Second Squadron (Fiat) commander, was seconded to SA as General Manager in 1956-57 then recalled and sent to the Soviet Union to train on MiG aircraft. Technical crews were also frequently exchanged between SAA and the SAF. Captain Issa Yazgi, an aircraft mechanic, was technical manager of SAA and involved in the acquisition of its first DC-4 Skymaster aircraft in 1956. Two years later, he was asked to return to the SAF.²¹³

Due to its close ties with the military, SAA flights were considered by Israel potential military missions, particularly when straying off course, which was seen as attempted espionage. On 12 December 1954 an SA DC-3 was intercepted by two IAF Mustangs en-route from Damascus to Cairo. It was forced to land at Lod Airport for 'inspection' on suspicion of carrying out aerial reconnaissance. This was the official explanation, but in reality the aircraft was intercepted at a distance of fifteen nautical miles west of the coastline, which would have made it impractical to photograph targets of any tactical significance, and no photographic equipment was found on board. Furthermore the aircraft carried five passengers and a cabin attendant. It was therefore thought that the interception was in retaliation for the capture of five IDF soldiers while replacing batteries of eavesdropping devices installed deep inside Syrian territory. Israeli explanation that the SAA aircraft were part of the Syrian military did little to prevent United Nations and international protests, eventually forcing Jerusalem to release the aircraft, crew and passengers.

²¹³ 'SAF Officers Handbook', Doc. SH-011, July 1959, IDFA 121-535-2004
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While inspecting the crew on board the Dakota, IAF intelligence officers were surprised to find in the co-pilot's seat Abdo Said Wahaba, who served as a Harvard pilot during the Palestine war. Wahaba, a Christian born in 1925, was apparently discharged from the SAF as early as 1951. He held the relatively low rank of lieutenant and became a Dakota co-pilot with SA though he failed to present the Israeli authorities with a commercial pilot license upon request. Flying a passenger aircraft without the appropriate license was (and still is) considered a serious breach of international civil aviation laws.²¹⁴

Owing to range and payload restrictions of the DC-3, a decision was taken in 1954 by SA management to complement the fleet with the larger four-engine Douglas DC-4 Skymaster. Three aircraft were acquired between 1955 and 1958. The first was purchased from the French company Cie. Autrex and delivered in February 1955, only to meet an unfortunate fate when it crashed at Damascus Airport on 2 October 1964. In connection with this acquisition, the SA manager, a former SAF pilot, was accused of financial corruption and arrested, together with two officials from the Department of Civil Aviation.²¹⁵ The second DC-4 was acquired in May 1956, from the US operator Riddle Airlines.

The third and last aircraft was purchased from Swissair and delivered in October 1958. This aircraft, one of the last ten DC-4's built in 1947, originally a passenger aircraft, was converted to freighter configuration by SA, and was not used to carry passengers. It was regarded by the SAF as its 'strategic' transport aircraft in its dual civil/military role,

²¹⁴ 'Report on the interception of Syrian aircraft', 13 December 1954, IDFA 121-535-2004

²¹⁵ 'Annual report on the SAF for the year 1955', 2 February 1956, FO 371/121880

compensating for the withdrawal of the Third Squadron's Fiat G-12, the only long-range aircraft in service.

The DC-4 freighter had a brief career with SAA, and was lost in a landing accident when at the end of a cargo flight from Accra, Ghana, it ditched into Lake Congo, some 200 kilometres northeast of the capital Leopoldville on 1 September 1960. The crash was attributed to poor piloting skills and bad weather, which were also the causes for the loss of two Dakota aircraft. The first accident, on 1 December 1952, occurred during a scheduled domestic flight from Damascus to Aleppo, when the aircraft struck a mountain after having deviated from its planned route. Ten passengers and five crew members were killed in the mishap. The second accident, on 24 February 1956, happened en route from Aleppo to Damascus when the aircraft flew through a thunderstorm in cumulonimbus clouds, which caused both engines to fail. It was the worst air accident in Syrian history causing the loss of sixteen passengers and three crew members. All three accidents between 1952 and 1960 were attributed to the poor airmanship of the crew and were a direct result of unsatisfactory training and lack of experience, believed to be the result of the frequent exchange of civil and military air crews.

On 25 December 1958, following the Egyptian-Syrian unification into the United Arab Republic (UAR), SAA and the Egyptian national airline Misrair were merged to form the United Arab Airlines (UAA). As a result SAA, now reduced to the UAA's Syrian affiliate, confined its operations to regional and domestic destinations, its longer-range international routes being operated from Cairo. Another sign of losing Syrian identity was when SAA was forced to re-register its fleet in Egypt in 1960, and the aircraft's livery was repainted from Syrian Arab

Airlines to UAA colours.²¹⁶ Prior to the union with Egypt, SAA did not have enough qualified pilots, particularly during the first half of the 1950s when most captains were German mercenaries, forcing the airline to advertise for overseas aircrews. One of these was Hank Warton, an American Jewish former military pilot who flew DC-4s with SAA for a couple of years. Warton, his employers unaware of his background, was later interested in working for the Israeli national airline EL AL; but when his application to SAA was made known to the Israeli authorities he was promptly recruited to the Israeli intelligence organization Mossad and asked to monitor aviation in Syria in general, and the nature of cargo flown by SAA, with an emphasis on military cargo in particular.²¹⁷

With only two DC-4s remaining operational by the end of 1960, SAA found it difficult to maintain a regular international schedule. The breakdown of the Syrian-Egyptian union on 26 September 1961 enabled the airline to obtain three modern long-range Douglas DC-6B airliners previously operated by the Egyptian airline. The aircraft were delivered in October and the company was renamed Syrian Arab Airlines (SAA) with the entire fleet now bearing again the Syrian flag and insignia. The DC-4 was the last SAA aircraft considered a reserve military transport asset by the SAF. By the time the larger Douglas DC-6B arrived, the SAF had already restored its own independent transport capabilities by acquiring dedicated Ilyushin IL-14 military transport aircraft from the Soviet Union and East Germany.

²¹⁶ Lundkvist Aviation Research, 'DC-4' (Florida, June 1981), pp. 7, 55, 83.

²¹⁷ Born Heinrich Lartzki in Germany in 1916, Warton immigrated to the US in the late 1930s and joined the US Army Air-Force as transport pilot in 1941, changing his name to Henry Arthur Warton. He was a colourful person and adventurer, involved in many illegal air operations, particularly in Africa, and well known in the late 1960s for his role in smuggling aircraft and ammunition to Biafra during the war with Nigeria. Author's email correspondence with David Weinrich, 17 October 2009.

The role of SAA as the reserve transport arm of the SAF diminished at the end of 1958 in tandem with the establishment of the UAR. By incorporating SAA's fleet into Misrair and forming UAA the SAF found itself without dedicated medium to long-range military transport aircraft of its own. This necessitated the acquisition of the IL-14 fleet, thus making SAA's fleet redundant. Nevertheless, between 1948 and 1958, SAA became force multiplier by virtue of its potential for providing the SAF with aircraft and aircrews in addition to its own. Given that the SAF at that time had no reserve pilots meant that the use of SAA resources alongside its own meagre transport squadron capabilities compensated for the lack of a strong and professional transport force. Between 1958 and 1968, the only new aircraft acquired by SAA were a couple of Super-Caravelle passenger jetliners (in 1965 and 1966 respectively), which lacked any military potential. When hostilities with Israel reached new peaks in 1966 and the tensions that eventually led to the 1967 war intensified, the Syrian government decided to restore SAA to its former status as an operating arm of the SAF. Decree No. 96 was published on 16 August, declaring the SAA an organ of the Ministry of Defence.²¹⁸

All things considered, the operation of military aircraft under civil disguise had many advantages and stemmed from the Soviet doctrine of disguising military aircraft for civil operations, as was done over the years by the USSR, East Germany, China and North Korea for example. The operation of SAF aircraft in SAA colours enabled the military to operate overseas flights without having to expose the operator's true identity. These flights were mainly used for carrying state officials, transporting arms and ammunition and clandestine flights to remote destinations, which would have otherwise been difficult to access.

²¹⁸ *Al-Jarida al-Rasmiyya li-l-Jumhuriya al-Arabiya al-Suriya*, 16 August 1966, pp. 10243-44.

This also had the advantage of adopting operational practices that were recognized by the International Civil Aviation Organization (ICAO) thus enhancing the safety of these operations by ensuring that both aircraft and crews were recruited, trained and licensed in accordance with stringent civil standards that were higher than military standards. The close civil/military linkage was apparent by examining the origins of SAA's senior management over the years clearly showing the tight affinity between SAA and the SAF. Traditionally the airline's chairman and managing director were former high ranking SAF officers.²¹⁹

Table 10 Syrian Arab Airways/United Arab Airways (Syrian) Aircraft Fleet 1947-67

Aircraft Type	No. in use	Period of Operation	Remarks
Douglas DC-3 Dakota	5	1947-1967	In joint SA/SAF use
Beech D.18S	2	1949-1958	Ditto
Douglas DC-4 Skymaster	3	1955-1964	Rarely used by the SAF
Douglas DC-6B	4	1961-1967	Inherited from UAA. Rarely used by the SAF
Sud Super-Caravelle 10B	2	1965-1983	Not in SAF use

²¹⁹ Muwaffaq Hinnawi graduated from the first flying course and participated in the Palestine war flying Harvards. Later he flew Fiats and commanded the transport squadron. In 1951 he became Director-General of Syrian Arab Airways. He rejoined SAF service in 1956 and was placed in charge of pilot training. Abdel Wahab Hakim, Director General of the Syrian branch of United Arab Airways in 1960, was previously a high ranking SAF officer. Muhammad Tawfiq Karawi, commander of Deir ez-Zor air base in December 1949 and later a general, was SAA's Director-General in 1964. Muhammad Assad Mukayyed served as SAF headquarters commanding officer in April 1949, as head of division 4 (quartermaster) of the SAF in 1957, and later as a general, served as SAA Chairman between 1966 and 1975. Hassan Zaanun Zwain, an Iraqi by birth, was seconded to the SAF as flight instructor in the first pilot course (1947), commanded Mezze air base in 1953 but was dismissed from the SAF in 1957 following allegations of involvement with the CIA to topple the regime. Reinstated into the SAF, Zwain headed the mission to purchase the IL-14 transport aircraft from the Soviet Union in 1958, and became Deputy Chairman and Director General of SAA in 1966.

See: 'SAF Officers Handbook', July 1959 and various issues of Flight International World Airline Survey (WAS), including 13 April 1961, p. 508, and 14 April 1966, p. 634. (www.flightglobal.com/flightinternational/archives.html)

Evolution of the transport fleet

The acquisition of transport aircraft by the SAF between 1949 and 1954 was done haphazardly and was characterized by the procurement of single aircraft of a single type. This practice was a heavy burden on the already high maintenance costs. Difficulties in supplying spare parts from diverse sources and the fact that the fleet comprised British, Italian and French types with a requirement to keep a small number of air-crews licensed to fly a variety of aircraft types, did little to enhance flight safety. Immediately after the Palestine war the SAF split the third transport squadron into two sections. One was the Syrian Arab Airways airline company, which as noted above operated civil flights but was subordinated to the SAF and in time of emergency fully mobilized. The second was a regular SAF squadron erratically operating various types of aircraft.

The AAC-1 tri-motors, acquired from the Lebanese branch of Air France in July 1949, had been built in July 1945 and were exactly four years old when entering SAF service.²²⁰ But then, instead of expanding the small fleet with an aircraft type already in its use, the SAF was forced to introduce into service single types of the Caudron C449 Goeland and the Italian Fiat G-12, the latter bought for \$20,000. It arrived in Syria on 28 October 1949 and was a second-hand aircraft formerly operated by the Italian Air Force.²²¹ Despite being externally similar to the AAC-1, the G-12 was inferior in performance. It was slower, had a shorter range and a more confined cabin. However, the SAF did not reject the addition of the G-12, possibly because of political pressure by the government, which had regarded the relations with Italy as highly

²²⁰ Jacques Chillon, Jean-Pierre Dubois, John Wegg, French Postwar Transport Aircraft (Tonbridge: Air Britain Historians Ltd., 1980), pp. 76-79.

²²¹ 'Intelligence summary no. 136', 2 December 1949, IDFA 69-3800137-1951

important in the aftermath of the massive combat aircraft acquisition. Short lived, the G-12 was withdrawn from use as early as 1952.

In May 1953 the SAF decided to replace the grounded G-12 and initiated talks with the Egyptian airline Services Aeriens Internationaux d’Egypte (SAIDE) for the purchase of a couple of Fiat G-212 (the civilian model of the G-12). The deal was valued at SyP 25,000 for both aircraft. SAIDE, which owned five such aircraft, were keen to dispose of the last two surviving planes as it was awaiting the delivery of newer Curtiss C-46 aircraft. Though financially attractive, the deal fell through as the aircraft were considered inferior to the Dakota already in use, and in poor technical condition.²²²

In August 1954 the French ambassador to Damascus proudly presented to the SAF a single Caudron C-449 Goeland light transport aircraft, a former Armee de l’Air example that had served during WWII. There was no apparent logic in acquiring this aircraft, though it was given as a gift. It was inferior to the almost identical Beech 18, bought that year and delivered to SAA in 1955. As with the G-12, the Goeland was a single aircraft, of a single type. However, the Syrian government did not wish to offend their former colonial master, forcing the SAF to take the aircraft into service. Like the G-12, the Goeland was short-lived and was rarely flown. It was withdrawn from service after only two years in service.²²³ Gradually distancing itself from western influence, the SAF no longer wished to retain non-Soviet aircraft types in its small transport fleet, and after 1955, no longer operated transport aircraft of western origin.

²²² ‘Intelligence summary’, 17 May 1953, IDFA 673-535-2004.

²²³ ‘Air intelligence report’, September-October 1954, IDFA 679-535-2004.

Operational Activities

Clashing with Israel

The early 1950s saw the Syrian and Israeli armies engaged in repeated low level clashes along their joint border on the eastern shore of Sea of Galilee, emanating mainly from disputes over the distribution of water resources and control of the demilitarized zone in the area.

In January 1951 Israel began surveying both banks of the river Jordan with Damascus's tacit consent, and the next month initiated works to deepen the river, some four kilometres south of Lake Hula. The project was vehemently opposed by Damascus, which claimed that part of the works were carried out on Syrian soil and that it gave Israel local military advantage, but General William Riley, commander of the United Nations Truce Supervision Force (UNTSO), set up in May 1948 to supervise the reduction of Arab-Israeli violence, confirmed the Israeli position that the project had no military significance whatsoever. Accordingly, the UN rejected the two Syrian complaints filed with it.

Riley, however, asked Israel to enter into negotiations with Syria over the precise demarcation of the works. As his demand was ignored by Jerusalem, which continued its development work, on 15 March fire was opened from Syrian positions on an Israeli tractor working on the eastern bank of the Jordan River triggering a series of small fire exchanges that eventually culminated into the two most serious clashes between the two armed forces since the July 1949 signing of the armistice agreement: the Hama and Mutillah incidents. Both had IAF aircraft operating freely over the battle zone without any interference from the SAF which went to great lengths to refrain from responding. This behaviour was apparently motivated by political

considerations, namely an attempt to prevent the incident from escalating to a fully fledged confrontation, on the one hand, and concentrating instead on defending critical targets within Syria from possible IAF attacks.

The first serious incident took place on 4 April 1951 when the Syrians opened fire on an IDF patrol in the demilitarized zone of Hama, a few kilometres east of the southern tip of Sea of Galilee, killing seven Israeli soldiers. The following day the IAF retaliated by dispatching four Mustangs and four Spitfires to bomb the sources of fire, targeting the Hama police station as well. The SAF was consequently placed on high alert with Fiat aircraft making frequent patrolling sorties along the border, at times crossing over into Israeli airspace (though these few infractions were probably due to navigational error rather than offensive intentions). More widely, the SAF allocated up to seventeen Fiat aircraft to defend the southern border area while transferring six more from Damascus-Mezze to eastern airbase of Tadmur on 7 April. By way of preparing for possible IAF offensive operations against the SAF's main air base in Damascus-Mezze, orders were issued to prepare the three, more distant airfields of Dar'a, Dmeir and D'math should dispersal of aircraft be required. These airfields had not been in operational use since the French Mandate. Dar'a is some seventy kilometres south, Dmeir – forty kilometres to the northeast, and D'math - some twenty kilometres west of the capital along the Damascus-Beirut road. SAF operations were directed from the operations room of the army in Damascus, closely linked to army HQ. Directives were issued to the air defence command to erect nine new forward observation posts along the border to report and encounter intruding enemy aircraft and

informing army positions in Quneitra so that anti-aircraft posts be ready to respond and open fire.²²⁴

Syria also repositioned twelve Bofors 40mm guns, delivered from Lebanon in April 1951, around bases at Damascus-Mezze, Dar'a and Azra, and strengthened the air defence around the capital and its southwestern approaches. A chain of powerful floodlight masts was erected around Damascus, enabling operators to transmit reports of incoming enemy aircraft as soon as these were spotted. SAF operations centre declared the area bounded by Quneitra, Azra, Jdida and Yabous a danger zone, which meant immediate notification be relayed to the electricity company to cut supply around Damascus to prevent the enemy from accurately pinpointing targets within or around the capital. Concurrently, Syria asked both Egypt and Iraq to help enhancing the SAF's offensive capabilities by sending fighting aircraft and crews.

Meanwhile, on 2 May, another incident took place, this time near the hill of Mutillah, which was under Israeli sovereignty. Syrian forces occupied the spot and IDF forces from the elite Golani infantry brigade failed to recapture the hill. Four days later, on 6 May, four IAF Spitfires appeared over the area and opened fire on the Syrian forces driving them into a hasty retreat. On May 7 Damascus asked Baghdad for aircraft and anti-aircraft guns, and three days later an Iraqi mission arrived in Damascus to coordinate military assistance. After its return to Baghdad on 14 May, the Iraqi High Command ordered the dispatch of an Iraqi mission that included ground crews from the IrAF Seventh Squadron, an anti-aircraft battery, as well as transport and medical units, which arrived in Damascus on 17 May. On that day, eight Iraqi Hawker Fury fighters from the Seventh Squadron took off for Damascus-Mezze accompanied by

²²⁴Intelligence summary no. 171', 6 May 1951, IDFA 695-535-2004.

air and ground crews, in addition to six Bofors 40mm anti-aircraft guns and 476 men, including twenty-six officers. For fast communication with Baghdad, a de-Havilland Dove transport aircraft was dispatched, shuttling between the two capitals. At the head of the Iraqi force was the squadron's commander, Lt. Col. Kazem Abbadi, who liaised with the SAF through the Iraqi military attaché's office in Damascus. It was agreed that IrAF aircraft would stand alert against possible IAF attacks on major Syrian cities and strategic installations, with two Furies standing alert for immediate scramble daily between 0600-1900hrs and another pair on high alert inside the pens. The anti-aircraft guns were positioned around Damascus-Mezze, being fully integrated with the SAF unit guarding the airfield. The Iraqi force stayed in Syria until 3 September.²²⁵

The SAF was reluctant (as were probably the Iraqis) to use the assembled force for other than a defensive role, despite being fully capable of conducting offensive operations. Egypt's initial response was lukewarm, but it could not remain aloof in face of the swift and effective Iraqi action. The REAF offered ten Macchi 205 fighters at the beginning of June, albeit without air or ground crews, despite repeated Syrian requests to include these as well given the SAF's lack of sufficient qualified pilots to man two squadrons. The Macchis were therefore relegated to a supporting role in the event that the Fiat fleet was depleted by losses or low serviceability, thus playing a marginal role in the concentrated effort. Since Fiat and Macchi aircraft did not differ profoundly, SAF pilots dispatched to Egypt had no difficulty flying them in small batches from El Arish airport to Damascus-Mezze (on 5-15 June) but refrained from manning them on operational missions against the IAF. Ironically, the REAF did not request the return of the 'loaned' aircraft as these were considered obsolete in the wake of the Palestine war.

²²⁵ 'Air intelligence report', March 1954, IDFA 679-535-2004.

After the delivery of jet aircraft the remaining Macchis were relegated to training and were no longer operated as combat aircraft. SAF requests to Egypt for aid in the form of Vampire or Meteor aircraft were met by indifference, though Cairo promised to send five jets to Damascus-Mezze in a gesture of solidarity, which was accepted with minimal enthusiasm by the Syrians for understandable reasons.²²⁶ While the Iraqi detachment was based in Damascus-Mezze the SAF deployed its Fiat G59 aircraft to the northerly Sahel a Sahara airfield in an effort to distance them from possible IAF attack and to make room in Damascus-Mezze, which was already cramped with aircraft and aircrews.²²⁷

Following the brief skirmishes between Syria and Israel in September and October 1953 after Israel began diverting water from the river Jordan to the southern area of the Negev, the SAF increased its alert and several actions were taken to prepare for large-scale hostilities. Seven Fiat G55AM aircraft were transferred from the central flying school to Damascus-Mezze, while a similar number of Meteor 7/8 jets were flown from Damascus-Mezze to Aleppo. Instructor pilots were hurried from the central flying school to Damascus-Mezze to enhance combat readiness. While advancing more aircraft to air bases close to the Israeli border in anticipation of possible clashes was a logical move, the dispersal of the Meteors farther away from the front was an indication of both their poor operational readiness and the fear of their possible destruction by the IAF.²²⁸

²²⁶ 'Intelligence summary no. 171', 6 May 1951; no. 172, 17 June 1951; no. 173, 5 July 1951, IDFA 673-535-2004

²²⁷ 'Intelligence summary no. 177', 4 December 1951, IDFA 673-535-2004; 'Intelligence summary no. 195', 12 December 1953, IDFA 673-535-2004

²²⁸ 'Special Intelligence Report: Operation Kineret', January 1956, IDFA 121-535-2004

Inter-Arab cooperation

Iraq's active support to Syria in the clashes over the demilitarized zone was somewhat surprising given the somewhat strained relations between the two states. Though providing Syria with military support during the 1948 war - the IrAF donated two Anson light bombers together with their crews as well as several Iraqi-crewed Fury fighters to the SAF - Iraq's aspirations for closer ties were dashed as Damascus frowned on Baghdad's persistent quest for a Fertile Crescent unification under its headship, and gradually came under the sway of Egypt – the largest Arab state and Baghdad's perennial rival for regional hegemony.²²⁹

Indeed, Egypt was probably Syria's staunchest supporter, both during and after the Palestine war, providing significant military assistance, initially in the form of advisors, including flight instructors, then in the form of arms supplies, including ten Macchi MC-205 surplus fighters acquired from Italy during the summer of 1950.²³⁰ During Zaim's rule an agreement was reached for the training of seventy Syrian officers and soldiers, including forty SAF personnel, in Egypt.²³¹ Upon arrival, however, they were refused entry, probably due to Zaim having second thoughts about his relations with Egypt, and returned to Syria empty handed. Yet after Zaim's downfall cooperation was quickly resumed and in the summer of 1951 ten SAF pilots were sent to Egypt to ferry the Macchi fighters.

²²⁹ Gordon, *Syrian Politics and the Military*, pp. 134-36; 'Situation report no. 12', 31 October 1949, IDFA 274-3800137-1951

²³⁰ 'Annual Report no. 2 on the REAF', British Air Attache Cairo, 24 January 1952, p. 10, TNA, FO 371/96993

²³¹ 'Intelligence report no. 125', 16 September 1949, IDFA 274-3800137-1951

Though disappointed to find the Egyptian aircraft badly worn out,²³² the SAF organized the Macchis, which were identical in armament and performance to the Fiat G55/59 aircraft in its service, into a new unit, the Fifth Squadron based in Damascus-Mezze. This, however, was of little help in keeping the aircraft in an operational condition considering their poor state upon arrival and the SAF's difficulty, and probably unwillingness, to invest in their restoration to an airworthy condition because of their questionable operational value. Only as late as 1954 was a serious attempt made to bring the small fleet to an acceptable level of serviceability, but then the SAF had already acquired Spitfires and Meteors that made the Macchis largely obsolete. Since 1955, the Macchis were kept stored in derelict condition and never saw active duty again, being eventually dispersed around air bases to serve as decoys.

In March 1955 Syria joined the Egyptian-led Arab Collective Security Pact, established as a counterweight to the Anglo-American-sponsored Baghdad pact, and seven months later the two states signed a mutual defence pact whereby both parties undertook to come to each other's aid in the event of an external aggression. A joint war committee, headed by both chiefs of staff, was established and Syria asked for Egyptian support in defending Damascus against Israeli air attacks. In return, Damascus agreed to provoke border skirmishes with Israel whenever the latter intensified its military pressure on the Gaza Strip, from the Palestinian 'Fedayeen' launched attacks on Israeli towns and villages with Cairo's tacit approval and support.

The most significant development for Syria, and one that accelerated its shift to the Soviet orbit (see below), was the acquisition of the same weapon systems that were bought by the Egyptian army from Moscow. This ensured standardization of equipment, training, tactics

²³² 'Annual Report No. 2', British Air Attache (Cairo), 24 January 1952, p. 10, TNA, FO 371/96993

and methodology. In an unprecedented event, on 17 April 1956, an Egyptian army unit marched in Damascus as part of Syria's traditional military parade, signalling the strengthened military ties between both countries.²³³ However, when during the Suez/Sinari crisis of October-November 1956 Egypt expected direct Syrian intervention in accordance with their military pact, primarily through the opening of a second front that would force Israel to divert some of its forces from the Egyptian front, Damascus failed to deliver the goods.

Though a joint command and control centre was established, SAF liaison officers showed little enthusiasm for operational collaboration with their Egyptian counterparts. Egyptian requests for offensive missions on Israeli targets were met with indifference, particularly since the EAF itself failed to operate beyond its boundaries. Adding to that was the fact that none of the SAF's newly acquired MiG-15 aircraft were present on Syrian soil (save for three MiG-15UTI trainers, without qualified pilots to fly them).²³⁴

A vivid illustration of the poor cooperation between the two armies was afforded by the Ibrahim al-Awal incident. On 31 October 1956, the Egyptian Navy frigate was ordered to sail from its Alexandria base towards the Israeli coast and shell the cities of Tel Aviv and Haifa. At 03:15am it was spotted by the Israeli navy after having shelled Haifa and was engaged in a naval encounter supported by IAF attack aircraft. The destroyer's commander, Captain Hassan Rushdi Tamazin frantically radioed the Egyptian liaison office in Damascus for SAF assistance in fending off the Israeli attacks. But his pleas remained unanswered as the SAF refused to scramble aircraft at night, and when the Israeli aircraft appeared overhead in the early morning

²³³ 'Intelligence Report (un-numbered)', 19 October 1955, IDFA 88-644-1956

²³⁴ Cooper and Nicolle, *Arab MiGs*, vol. 1, p. 90.

hours it was too late for SAF aircraft to affect the outcome of the battle. Eventually, the frigate was captured as war booty and impressed into the Israeli navy.²³⁵

Yet in this general atmosphere of incompetence the SAF managed to score an aerial victory of sorts. The force had been on high alert due to frequent incursions of RAF Canberra PR7 photo-reconnaissance aircraft from the Akrotiri air base in Cyprus tasked with visually verifying that no Soviet or East European arms shipments were arriving in Syria as these shipments could have found their way to Egypt. Of particular concern were reports from the US embassy in Damascus that MiG aircraft were being delivered to the port of Latakia. Tahseen Zaki, the EAF air attaché in Damascus, spotted two Canberras, which regularly overflew Latakia, Aleppo and Homs en route to Damascus, after which they would turn westward towards Beirut and back to Akrotiri. The SAF scrambled its Meteors several times but failed to make contact with the intruders. There was one exception, however, when on 6 November, Lt. Jaban Adnan²³⁶ was sent with his number two, Hafez Assad²³⁷ to intercept an RAF Canberra coming in from the east. Having flown for some time in clouds at an altitude of 10,000 feet, the skies suddenly cleared and the two Meteors were in an ideal position to open fire on the Canberra from astern, with Adnan hitting the bomber's starboard engine causing it to lose altitude and crash into the Beka valley in eastern Lebanon. Both British pilots ejected safely but the navigator perished. Zaki had mistakenly quoted the names of the SAF pilots involved in the shoot down as Munir

²³⁵ Nitza Tzameret, 'The Gift Given by Aman [IDF Intelligence Corps] to the Israeli Navy', *Malam Bulletin*, No. 20 (1998; Hebrew), p. 9.

²³⁶ Born in 1930, Adnan studied flying in the UK in 1954, graduating as a Meteor pilot by early 1956. 'SAF Officers Handbook', July 1959.

²³⁷ Born in 1930, Assad joined the Homs military academy in 1952, graduating two years later as a Fiat pilot, later converting to the Meteor. He was one of the few Alawites to join the SAF at the time. Assad studied in Egypt in 1955 and the Soviet Union in 1957 on the MiG-15/17, becoming SAF C.in. C in 1963 and Syria's president in 1970 (ibid.).

Garudy and Muwaffaq Assassa.²³⁸ Later that day Assad was scrambled once more, but this time the intruding aircraft, a USAF U-2 spying plane operating for the CIA, flew too high and escaped unscathed. On returning to Aleppo, the Meteor brakes failed and Assad crash-landed his aircraft, shearing off the undercarriage and causing considerable damage to the fuselage and wings.²³⁹

After the Suez crisis the scope of Syrian-Egyptian cooperation slowed down. This was partly due to Cairo's dire need to restore its shattered air power, leaving little time and resources to aid Syria, and partly to the Egyptian disappointment with the SAF's complete dereliction of its duties during the war. It was in the Soviet interest to restore the working relations and help eliminate the remnants of Western influence in both countries by strengthening their armies. Corresponding with Moscow's interests, the SAF realized that its only ally in the Arab world would have been the EAF, as Iraq was ruled out politically and the air forces of Lebanon, Jordan and Saudi Arabia were too small and insignificant. For its part, and despite its disillusionment, Cairo still hoped that maintaining close military cooperation with Syria would be beneficial over the long run hence renewed its technical assistance and training of SAF pilots on the newly delivered MiGs. It even sent six pilots to Syria to enable the operational readiness of its new MiG-17 squadron in the crucial air defence role.

In early 1957 the SAF formed the Ninth Squadron comprising twenty-five MiG-15 aircraft and fifteen pilots trained in Egypt prior to the Suez crisis. Though most of the aircraft

²³⁸ Garudy graduated in 1954 and was qualified in the UK on the Meteor, succeeding Assassa in early 1957 as commander of the First Squadron. Muwaffaq Assassa graduated in 1950 as a Fiat pilot, converting in the UK to the Meteor, and appointed commander of the First Squadron in early 1956 following a brief spell in Egypt as flight instructor. Cooper & Nicolle, *Arab MiGs*, vol. 1, p. 74; 'SAF Officers Handbook'.

²³⁹ Brian Cull, *Wings over Suez* (London: Grub Street, 1996), pp. 335-38; Seale, *Asad*, p. 35; Cooper and Nicolle, *Arab MiGs*, vol. 1, p. 76; 'SAF Officers Handbook', p. 6.

were destroyed during the conflict before being delivered to Syria, their aircrews survived and fresh deliveries of aircraft were initiated by Moscow during that year. Israeli intelligence estimated that while the general standard of the Syrian combat pilot remained poor, a slight improvement was felt as a result of the intense training on Egyptian soil and frequent joint exercises with EAF pilots. Notwithstanding the importance of Syrian-Egyptian cooperation at the time, Syrian enthusiasm wound down significantly both as a result of the failed union and due to increased training and support provided directly by the Soviet Union.²⁴⁰

Shifting into the Soviet orbit

Syrian-Soviet relations gained considerable momentum after the February 1954 toppling of Shishakli's personal rule, with the Syrian media taking a more vociferous pro-Soviet line as Moscow's criticism of Israel intensified. In March 1955 the Soviets responded to reported Turkish and Iraqi troop concentrations on the Syrian border (the two countries had just signed a 'pact of mutual cooperation' to resist outside aggression that led in short order to the formation of the Baghdad pact) by expressing their readiness to extend military assistance to secure Syria's 'independence and sovereignty' and by the autumn this display of support had culminated in the signing of the first-ever Soviet-Syrian arms deal, followed two years later by a large-scale economic agreement. By that time, Syria was estimated to have procured more than £100 million worth of Eastern bloc weapons and war materiel and over half-a-billion dollars in economic aid.²⁴¹

²⁴⁰ 'Report on Arab air forces in 1956 and after' March 1957, IDFA 687-535-2004

²⁴¹ See, for example, Sabrina Petra Ramet, The Soviet-Syrian Relationship since 1955 (Boulder: Westview, 1990); Karsh, Soviet Policy toward Syria since 1970 (London: Macmillan, 1991); Golan Galia, Soviet Policies in the Middle East: From World War II to Gorbachev (Cambridge:

For the first time the SAF was able to maintain a fully operational MiG-15 squadron, albeit initially on Egyptian soil. It abandoned the haphazard training syllabus for the far more coherent and systematic Soviet-based training conducted in the Soviet Union, Czechoslovakia and Poland. This transition also signalled the withdrawal from service of the British aircraft that increasingly suffered from low serviceability not only because of poor Syrian maintenance but also because of London's reluctance to provide an orderly supply of spare parts and operational equipment.

In May 1956 Syria signed its second arms deal with Moscow (via Czechoslovakia - a common conduit) for the supply of twenty-five MiG-15 aircraft (including four UTI training aircraft), thirty-two heavy 85mm (radar guided) and forty-eight light (20, 23, 37mm) anti-aircraft guns. T-34 and T-54/55 tanks acquired from Czechoslovakia were also fitted with 20mm anti-aircraft machine guns. The MiG aircraft arrived in Egypt two months later in order to conceal the owner's real identity and enable training of SAF pilots by Czech instructors.²⁴²

In August Syrian pilots began intensive training on the aircraft and by the end of the year the SAF could boast two squadrons of forty-five MiG-15 aircraft at the EAF air base of Abu Suweir. The aircraft were fully operational in converting SAF pilots from the Meteor and obsolete Spitfire to the more modern Soviet aircraft. The loss of approximately twenty-three SAF MiG-15 during the Suez crisis while being based in Egypt was a severe blow, but Moscow quickly replaced them with new aircraft sold for only a fraction of the price the SAF would have been asked to pay had it procured similar aircraft from Britain. At times the Soviets even gave

Cambridge University Press, 1990); Bruce Kuniholm, The Origins of the Cold War in the Near East (Princeton: Princeton University Press, 1980).

²⁴² Report on Arab Air Forces in 1956 and after, March 1957, IDFA 687-535-2004

the aircraft for free as this was the sphere where they enjoyed a relative edge over their western competitors which were more burdened by economic cost-effect considerations.

The intensification of military relations with Moscow enabled the SAF to complete the above noted process of terminating the services of foreign advisors who had constituted a considerable budgetary burden, not to mention the problematic mixture of schools and doctrines, and concentrate on the more effective Soviet expertise that was provided at a much lower cost and contributed to the establishment of a coherent training and operational system. In June, Foreign Minister Shepilov visited Damascus promising among other things Soviet help in the construction of airfields, while a SAF mission flew to Moscow to attend the Soviet Air Force celebrations. By 1957 some seventy Soviet aerial experts, including ten flight instructors who test flew locally assembled MiG aircraft, were permanently based in Syria assisting SAF pilots in transiting from the obsolete British aircraft to the modern MiGs. Soviet Bloc assistance also laid the groundwork for the construction of a much-needed radar network, a crucial element of air defence that the SAF had glaringly failed to muster since its inception.²⁴³

In the first half of 1957 the SAF acquired sixty MiG-17 aircraft in addition to eight 'Neisse' radar stations from Poland. Enabling detection of aircraft from a distance of up to 160 nautical miles and an altitude of up to 35,000 feet, these stations provided full coverage of IAF activities up to an area south of Tel Aviv, including the air bases of Tel Nof and Hatzor. In September 1957 the SAF concluded the purchase of twelve Ilyushin IL-28 light bombers, its first dedicated bomber force. The first SAF helicopters, six Mil Mi-1 aircraft, arrived by sea in January 1958 and were assembled at Damascus-Mezze. They were followed in May by three

²⁴³ Torrey, Syrian Politics, p. 340

Ilyushin IL-14 transport aircraft. In July 1957 the SAF formed its second MiG-17 squadron, No. 10, in Hama. The massive Soviet supply of hardware enabled the first air defence exercise in Syria, held in March 1958. By this time, the SAF had come to rely almost exclusively on its MiGs for combat operations, having disposed of its non-jet western aircraft and transferred the now-dated Meteors to a secondary close support role. The MiG-17s, delivered that year, took over the primary role of day and night interception, enabling the SAF to supplement the Meteors in the close support role and complete the quick process of British and Italian-made aircraft withdrawal from operational use.²⁴⁴

Table 11 - Syrian Air Force Aircraft in Use 1949-1958 (annual average)

Aircraft Role/Type	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958
Combat										
Fiat G-55AM	12	4	9	9	9	9	12	11		
Fiat G-59-2AM		18	12	24	23	22	16	10		
Macchi MC202/205 (1)			10	10	10	10				
Spitfire Mk.22					12	15	19	19	12	8
Meteor F-8					12	12	12	11	11	11
Meteor FR-9								2	2	2
Meteor NF-13						6	6	6	6	6
MiG-15bis								20	44	44
MiG-17									12	21
Total	12	22	31	43	42	59	69	79	87	92
Training										
North-American AT-6 Harvard	11	11	11	10	9	7	10	20	20	20
De-Havilland DH-82 Tiger-Moth	9	9	9	8	8	8	8			
Fiat G-46-2		12	9	9	9	7	7			
Fiat G55BM		2	1	1	1	1	1			
Fiat G59BM			2	2	2	2	2			

²⁴⁴ 'Report on the Development of Arab Air Forces, April 1955-April 1958', May 1958, IDFA 683-535-2004

De-Havilland DHC-1 Chipmunk					8	15	15	20	30	28
Meteor T-7					2	2	2	2	2	2
MiG-15UTI										
Total	20	34	32	30	39	42	45	42	52	50
Transport										
Avro A-652 Anson	1									
Douglas C-47 Dakota (2)	3	3	3	3	3	4	4	3	3	3
Junkers Ju-52 (AAC-1)	3	3	2	2	2	2	2	2		
de-Havilland DH-89A Rapide		5	5	2	2	1	1	1		
Airspeed AS-40 Oxford	2	3	3							
Fiat G-12	1	1	1							
Caudron C-449 Goeland							1	1		
Beechcraft D-18S (1)							1	2	2	2
Ilyushin IL-14									4	4
Total	10	15	14	7	7	7	9	9	9	9
Communications/Liaison										
Piper J-3C Cub	6	6	6	5	5	4	4	4		
Percival P-44 Proctor	6	6	6	4	4	4	4	4		
Fairchild F24R/UC-61 Argus	6	6	6	4	4	4	4	4		
Total	18	18	18	13	13	12	12	12		
Helicopters										
Mil Mi-1									10	10
Grand total									10	10

(1)It is believed that these aircraft never flew since delivery and were transferred to SA

(2)Operated in peacetime by Syrian Airways

5. Continuity and Change, 1958-63

Under the Egyptian boot

No sooner had the UAR been formed (on 1 February 1958) than the euphoric expectations of Syrian politicians and military officers were dashed as they realized that for Egyptian President Nasser the union was not a goal in and of itself but a steppingstone to the realization of his personal ambition for pan-Arab hegemony. As such, the UAR was not a partnership between equals in the supposed spirit of Arab brotherhood but the imposition of Egyptian domination over Syria.²⁴⁵

Already at the end of 1957, shortly before the formal announcement of the union, SAF officers reached an agreement with their Egyptian counterparts on the fundamental principles of the two air forces' collaboration within the looming union. According to the agreement,

- The EAF would have overall responsibility and command over the 'northern region'.
- The SAF would be reorganized so as to fully conform to the operational and functional structure of the EAF.
- The SAF, considered only a complementary element in the UAR Air Force (UARAF) would concentrate on air defence and close air support missions, leaving the 'strategic' heavy bombing and transport missions to the EAF.

²⁴⁵ For discussion of UAR formation and its operation see: Seale, The Struggle for Syria: A Study of Postwar Arab Politics, 1945-58 (Oxford: Oxford University Press, 1965); Malcolm H. Kerr, The Arab Cold War: Gamal Abd al-Nasir and his Rivals, 1958-1970 (Oxford: Oxford University Press, 1971); James Jankowski, Nasser's Egypt, Arab Nationalism, and the United Arab Republic (Boulder: Lynn Reiner, 2002); Podesh, The Decline of Arab Unity; Rathmell, War in the Middle East, London, Tauris, 2013

- By the end of 1959 all training activities would be under the EAF's responsibility with training taking place on Egyptian soil only due to the EAF's overwhelmingly superior training infrastructure.
- The training of SAF technical cadres would be a primary target and given preference over the production of new pilots as this would ensure a lower, yet more effective level of operational readiness.²⁴⁶

A more detailed integration plan was prepared during the summer of 1958 adding the following elements:

- The SAF would be fully subordinated to the EAF's Cairo headquarters.
- The EAF would deploy a MiG-17 squadron manned by Egyptian pilots in Syria.
- All military procurement efforts would be coordinated by the two forces.
- Syrian Airways would be integrated into Misrair, the Egyptian flag carrier, and the joint venture would be renamed United Arab Airlines.
- In case of need, Egypt would supply the SAF's fuel requirements.²⁴⁷

These draconian dictates formed the basis for the effective takeover of the SAF by the EAF, relegating the Syrian air force to an affiliate in total subordination to the Egyptian 'big brother'. The SAF had little influence over such critical matters as procurement, training, doctrine and operations, thus losing its independence to direct its operational development. Furthermore, the Soviet Union, by now the SAF's sole supplier, would only accept orders that had been funnelled through the EAF and would deliver all Syrian-bound aircraft to Cairo first; this meant that there was no longer any need for direct negotiations with the Syrian government on these issues.

²⁴⁶ 'Air intelligence report no. 2/58', 20 June 1958, IDFA 681-535-2004

²⁴⁷ 'Air intelligence report no. 21/58', 24 June 1958, IDFA 687-535-2004

The training of new pilots came to an almost complete halt as a result of the closure of the Homs army academy and the SAF's central flying school in Aleppo, and the transfer of the entire training program to Egypt, including aircraft and instructors. This practically left the SAF with no training facilities of its own, making it completely reliant on the EAF for the production of new pilots. Amin Nafuri, a former senior army officer and a minister in the UAR cabinet on behalf of the Baath party, reported at a meeting of the Arab League about a year after the UAR's breakdown that 'before the union, twenty to thirty flight officers [pilots] graduated each year; during the three years of union only five Syrian completed flight officer's courses in Egypt'.²⁴⁸ Hafez Assad, post-UAR SAF C. in. C and Syrian president, told his biographer Patrick Seale of the persistent humiliation endured by Syrian pilots and air crews at the hands of their patronizing EAF instructors, resulting in the expulsion of many of them from their courses - not on account of their poor abilities but because of their animosity towards, and mistrust of their Egyptian instructors.²⁴⁹

The situation on Syrian soil was not much better as the deployment of a vast number of Egyptian officers and soldiers in SAF headquarters, bases and squadrons - to a disturbing ratio of one Egyptian to one Syrian - did little to boost the SAF's confidence in its independent abilities or enhance its professional level. And as if to add insult to injury, Syria-based Egyptians displayed the same patronizing attitude to SAF personnel in their own homeland as they did to Syrian trainees in Egypt.²⁵⁰

²⁴⁸ Be'eri, Army Officers, pp. 139-40.

²⁴⁹ Seale, Assad, p. 59.

²⁵⁰ Podeh, The Decline of Arab Unity, pp. 52-54.

On 29 September 1960 an SAF pilot, Adnan Madani, defected with his MiG-17 to Jordan asking for political asylum. Six days later he committed suicide having told reporters that he defected 'to escape oppression and persecution that his countrymen, Syrians, suffer under Nasserist [sic] rule'.²⁵¹ Egyptian propaganda went to great length to deny the defection, claiming that Madani had landed in Jordan for lack of fuel and that he had not committed suicide but had rather been tortured to death by the Jordanians; later on the Egyptian media slightly changed this version alluding to Madani's alleged emotional/mental instability.²⁵² By way of alleviating Syrian discontent, and given the reduction of SAF order of battle to just two combat squadrons, the EAF offered 'symbolic' aid by sending a MiG-17 squadron to Hama airfield in March 1958 and carrying out a joint manoeuvre in which a couple of EAF IL-28 bombers took part (see below).²⁵³

These gestures were clearly not enough to boost Syrian confidence in the union's benefits to the SAF. Nor did they hide the fact that during the UAR existence the SAF became a political tool not only in the hands of the Damascus leadership but also in the service of Nasser's pan-Arab ambitions, manifested in his persistent efforts to subvert the pro-Western Arab conservative regimes in Lebanon, Saudi Arabia and Jordan. As early as 1957, as the prospect of the UAR loomed over the horizon, Syria offered asylum to Jordanian anti-monarchist elements, including army officers, who attempted to overthrow the young King Hussein.²⁵⁴ Yet the most serious use

²⁵¹ *Ibid.*, p. 127. Poteh erroneously notes Madani's arrival date in Jordan as 1 October.

²⁵² *Middle East Record*, vol. 1/60, p. 153.

²⁵³ 'Air intelligence report no. 2/58', 20 June 1958, IDFA 681-535-2004

²⁵⁴ Edroos, *The Hashemite Arab Army*, p. 317. See also: Lawrence Tal, *Politics, the Military and National Security in Jordan, 1955-1967* (New York: Palgrave MacMillan, 2002), p. 21; Torrey, *Syrian Politics and the Military*, pp. 333-35.

of the SAF's in the service of Nasser's political agenda was the crude attempt, eight months after the formation of the UAR, to harm Hussein while he piloted his airplane in Syrian airspace.

On 10 November 1958 the Jordanian monarch, accompanied by some family members, took off from Amman en route to the Swiss resort town of Lausanne for celebration of his 23rd birthday. The submitted flight-plan envisaged the crossing of the airspace of Syria, Lebanon, Greece and Italy before entering Swiss airspace; but upon entering the Damascus Flight Information Region the pilots were instructed to land in Damascus-Mezze as their overflight permit had allegedly not been coordinated in advance. After a brief exchange with Syrian air traffic control (under SAF responsibility), Hussein and former RAF Wing Commander Jock Dagleish, his flight instructor and close friend who acted as co-pilot, decided to dive to low altitude and return to Jordanian airspace. As they were trying to do so they were intercepted by two SAF MiG-17 fighters signalling to them, in accordance with international aviation practices, to land in Damascus-Mezze. Having evaded the interceptors at very low altitude the royal aircraft managed to land in Amman unharmed. Whether the Syrian pilots were ordered to shoot down the plane or just scare the king remains unknown; yet Hussein had little doubt that 'the motive was to kill him and put an end to the Hashemite Kingdom of Jordan'.²⁵⁵

This, to be sure, was not the first time for the SAF to be used for such gruesome political tasks under apparent Egyptian influence. As early as November 1956 the Syrian government had secretly ordered the force to kill Saudi King Faisal by colliding with his personal aircraft when it would be overflying Syrian territory. The reason for this attempted political assassination was

²⁵⁵ Nigel Ashton, King Hussein of Jordan (New Haven: Yale University Press, 2008), p.79. See also: Avi Shlaim, Lion of Jordan: the Life of King Hussein in War and Peace (New York: Knopf, 2008), pp 170-71, Edroos, The Hashemite Arab Army, p. 321.

Faisal's attempt to foil the formation of a Syrian-Saudi-Egyptian bloc, designed to counter the nascent Baghdad Pact, due to his animosity to Nasser's attempts to subvert the Saudi monarchy. Col. Louis Dakkr, one of the SAF's most skilled pilots and its future C. in. C, failed to carry out the mission claiming he 'could not ascertain the aircraft's whereabouts'. Given that the SAF's radar network was almost non-existent, and assuming the mission would take place at night, it was conceivable that Dakar was ingenuous. Alternatively, it is plausible that he feared for his life thus aborting the suicidal mission.²⁵⁶

According to Israeli intelligence estimates, the brief UARAF period caused considerable damage to the SAF by denying it its most advanced aircraft, the IL-28 bombers and MiG-17PF night fighters, and depriving it of the much required pilots and technicians.²⁵⁷ One of the few positive outcomes of the UAR was the construction of additional airfields adequate for operation by jet aircraft. The EAF realized that with only two or three operational bases the SAF was dangerously exposed to attack and annihilation. The MiG-17 squadron No. 101 which arrived in Syria in March 1958 and was manned by both Egyptian and Syrian pilots had dispersed to Dumeir air base which had an adequate runway albeit lacking proper ground facilities. By November work had begun on expanding the air base by adding taxiways, additional parking ramps, aircraft shelters, fuel and ammunition depots and maintenance hangars.²⁵⁸ EAF engineers also recommended an upgrade to Rassem el-Abbud air base so as to allow it to absorb the IL-28 squadron (see below).

²⁵⁶ 'SAF Officers Handbook'.

²⁵⁷ Author interview with Lt. Col. (Ret.) Haim Markan, head of the Syrian section in the IAF Intelligence Branch 1964-67, 2 September 2011.

²⁵⁸ 'Air intelligence report No. 36/58', 10 November 1958, IDFA 687-535-2004.

This operational benefit notwithstanding, the tense relations between the UAR constituent states set the scene for Syria's fifth military coup when on the night of 27-28 September 1961 a group of Syrian officers brought an end to the short-lived union. SAF Acting C.in.C. Brig. Muwaffaq Assassa ordered the arrest of the EAF mission in Syria and the expulsion of its members to Egypt. That this was a purely opportunistic ploy was evidenced by Assassa's participation in a subsequent military coup (in March 1962) demanding the restoration of the union after having been marginalized, along with other military officers, by the post-cessation civilian government. This attempt, however, came to naught forcing Assassa to flee to Beirut in order to avoid arrest.²⁵⁹

Weapons Acquisition

Ilyushin IL-28 - The 'Ghost' Bomber

Already before the formation of the UAR, as a corollary of its improved relations with Cairo and growing reliance on Soviet weaponry, Damascus signed an agreement (in September 1957) for the procurement of twelve Ilyushin IL-28 light bombers to be supplied later that year.²⁶⁰ The IL-28 was the standard tactical bomber of the Soviet bloc during the 1950s and 1960s. It was the first dedicated bomber acquired by the SAF, aimed at providing an adequate response to the IAF's purchase of the equivalent French Sud Vautour bomber that same year. The IL-28 enabled the Syrians for the first time to reach any target within Israel due to the

²⁵⁹ Beeri, *Army Officers*, p. 143; Cooper and Nicolle, *Arab MiGs*, vol. 2, p. 139; *Davar* (Tel Aviv), 8 April 1962, p. 1.

²⁶⁰ 'Air intelligence report no. 14', 7 October 1957, IDFA 681-535-2004 & 687-535-2004

aircraft's operational range of approximately 2,500 kilometres with a load of up to three tons of bombs.

Prior to the Suez crisis, Moscow supplied 35 similar aircraft to the EAF out of a total order for 50, including at least four high altitude photo-reconnaissance version aircraft designated IL-28U. By November work had commenced at Rassem el-Abbud air base in Syria in anticipation of the first Syrian IL-28 squadron, which initially was to be based at Hama.²⁶¹ The EAF, however, insisted that the Syrian aircraft be delivered to Egypt first, allegedly to facilitate the local training of SAF pilots. The EAF showed little enthusiasm for releasing the aircraft destined for Syria and held them back on the pretext that the SAF did not essentially require dedicated tactical bombers as the short distances to the Israeli battle zone and beyond could be easily met by MiG-17 aircraft. Although this aircraft could carry a smaller bomb load, it was arguably more agile. It had the ability to better defend itself in air combat, a challenge that the SAF would find difficult in coping with in future skirmishes with the IAF. The Soviets sided with Cairo on the matter and the entire SAF IL-28 unit was shipped to Egypt instead of Syria, with SAF crews training on Egyptian soil. The EAF promised to return the IL-28 to Syria 'sometime in the future' provided that superior trained Egyptian crews would be available, but had no intention of doing so. The EAF argued that the SAF would find it difficult to maintain such a complex aircraft and train sufficient qualified crews to enable optimal use for the 'complex' bombing missions.²⁶²

²⁶¹ 'Air intelligence report no. 15', 4 December 1957, IDFA 681-535-2004

²⁶² 'Intelligence report no. 33/58', 31 August 1958, IDFA 681-535-2004

Faced with Syrian protests, the EAF agreed to the token gesture of sending two IL-28s to Syria to take part in a joint air defence exercise in March 1958. This was the first time these aircraft actually landed in Syria. SAF requests to permit both aircraft to remain in Syria in the hope that they would be followed by the remaining aircraft to constitute an independent SAF IL-28 unit were thwarted, further humiliating the already challenged SAF.²⁶³

Prior to the departure of Egyptian aircrews to Cairo following the 1961 coup, the EAF agreed to leave behind four IL-28R photo-reconnaissance aircraft. This force was too small to justify the formation of a fully manned squadron and was organized as No. 40 Flight, the first unit of that size within the SAF.²⁶⁴ It would have been possible to arm the aircraft, but such a conversion would have been costly and time consuming given the small number of aircraft available and the engineering complications that would have necessitated their return to the Soviet Union.

Shortly after their activation by the SAF in 1962, one of the IL-28 was lost in an accident leaving a diminutive force of three aircraft. Though several sorties of photo-reconnaissance missions over Israel, close to the Sea of Galilee, were observed during the first half of the 1960s, the SAF never attempted any deep penetration missions for photography purposes. For example, the SAF could have tried to photograph the significant Ramat David air base in the Jezreel valley or strategic IDF targets around Haifa, such as the major Qurdani armour depot, rendering the

²⁶³ 'Development of Arab Air Forces, April 1955-April 1958', May 1958, IDFA 679-535-2004

²⁶⁴ A flight is part of a squadron. Usually a squadron has 12-24 aircraft, divided between two to three flights, each operating 6-8 aircraft. This structure enables better tactical control in operations of a restricted nature requiring a small number of aircraft, such as aerial dogfights.

small fleet insignificant.²⁶⁵ An attempt in 1964 to renew negotiations with Moscow for the supply of a replacement IL-28 bomber squadron, following the cessation from the UAR, proved stillborn. As a direct result of the SAF's deterioration following the union with Egypt and the lack of operational IL-28 bombers, the force would be deprived of an important tactical bombing element on the eve of the 1967 war.²⁶⁶

Buying the Supersonic MiG-21

The 1960s were characterized by the phasing out of the second generation, mostly subsonic jet fighters (except when in dive, which was unsuitable for air combat) and their replacement by supersonic fighters capable of reaching Mach 2 speed (twice the speed of sound). This in turn revolutionized air combat and gradually forced the retirement of the now obsolete subsonic interceptors to the secondary role of close air support. Since the Soviet Union had by now become Syria's primary, indeed only, arms supplier, it was only a matter of time before it would start supplying the SAF with its most capable tactical fighter, the MiG-21 (Soviet designation Ye-6T, NATO code name Fishbed C).

The MiG factory in Gorky started producing the MiG-21F-13 model in July 1960, it being the first version of the MiG-21 family capable of carrying air to air missiles (AAM) in addition to the customary guns.²⁶⁷ The SAF's inventory of jet fighters rapidly decreased as the Meteors had been taken out of service by 1960 with the MiG-17 remaining the only viable combat aircraft in use, albeit inferior to the third generation of supersonic jet fighters. With Israel

²⁶⁵ Zeev Lachish and Meir Amitay, A Decade of Disquiet: Israel Air Force History (Tel Aviv: Ministry of Defence Publishing House, 1995; Hebrew), p. 153.

²⁶⁶ 'Semi-Annual Intelligence Assessment', 16 July 1964, IDFA 20-64-2012

²⁶⁷ Yefim Gordon and Keith Dexter, Mikoyan MiG-21 (Hinckley: Midland Publishing, 2008), pp. 72-74.

receiving its first supersonic interceptor, the French Mirage IIIC, in April 1962, and Egypt introducing its first MiG-21s a month later it was imperative for the SAF to follow suit and upgrade its combat capability.

In June 1962 Damascus signed an extensive arms contract with Moscow comprising thirty-four MiG-21F13 interceptors and four MiG-21U trainers. Deliveries started with the initial batch of nine MiG-21F13 aircraft in the summer of 1963 and were completed the following year, enabling the formation of the first two supersonic squadrons, Nos. 5 and 9. Their first public appearance was on 22 July when eight aircraft overflew Damascus during a military parade.

Striving to bring the new aircraft to a state of operational readiness as soon as possible, SAF pilots were sent in large numbers to the Soviet air force flight schools at Lugovaya and Primorsko-Atharsk, where Cuban and Vietnamese pilots were being trained on the new MiG-21. The training syllabus included over one hundred flying hours on the Yak-18 basic trainer before moving to another hundred hours on the dual-seat MiG-15UTI and the single-seat MiG-17 which most SAF pilots knew well, as the majority of MiG-21 conversion pilots had been drawn from MiG-17 squadrons, such as Nos. 9 and 10.²⁶⁸ The MiG-21 aircraft underwent its baptism of fire on 13 November 1964 when a couple of aircraft engaged two IAF Mirage aircraft following the Tel-Dan incident (see chapter 6).

²⁶⁸ 'Annual Intelligence Estimate', IDF Intelligence Corps, December 1963, IDFA 19-64-2012, p. 29.

The First Helicopters

Almost all major Middle Eastern air forces introduced helicopters into their inventories during the first half of the 1950s - Egypt and Israel in 1949 and 1951 respectively, Iraq and Jordan in 1954 - most of which were purchased in Britain. Due to the SAF's frustrating procurement experience of the Meteor fighters, it was reluctant to even ask for such aircraft, though at the time helicopters were used for mainly humanitarian missions (e.g., search and rescue operations, and medical evacuation, etc.) which made it easier to obtain a British export license.²⁶⁹

The SAF's interest in helicopters increased following the Suez crisis as a result of the tightening of relations with the EAF and the new opportunities created by joining the Soviet camp. In January 1958 the first six Mil Mi-1 light helicopters arrived by sea and were assembled under Soviet supervision at Damascus-Mezze. They were organized as No. 8 flight owing to the small number in service, which did not justify squadron status. Pilot conversion took almost six months to complete with most candidates, such as Batash Yuness and Muwaffaq Tinnawi, drafted from the mother-unit, No. 60 flight that operated the IL-14 transports. The first helicopter pilot class included EAF pilots and was under Soviet instruction in Damascus-Mezze where the unit was stationed. Pending full operational capability, the Mi-1s were used for training purposes only.

The Mi-1 was designed in 1949 and became operational in 1951, becoming the first Soviet helicopter used by the military. It had accommodation for a pilot and three passengers or

²⁶⁹ Troop transportation by helicopters in the Middle East was initiated only in the late 1950s-early 1960s and direct combat operations - at a much later date.

two stretchers, which were suspended on the sides of the fuselage, linked to the cabin through a 'tunnel' that enabled the paramedic to care for the wounded during flight. The Mi-1's short range of only 217 miles meant that not all of Syria could be covered without making an intermediate landing for refuelling.²⁷⁰ The helicopter, which could easily reach Latakia in the west or Aleppo in the north without refuelling, was unable to fly non-stop from Damascus-Mezze to points such as Deir ez-Zor in the southeast or Kamishli in the northeast. The restricted performance soon led to its replacement with the larger Mil Mi-4. A single helicopter arrived in the summer of 1958 and the entire complement of ten helicopters was assembled and in flying condition in early 1960.²⁷¹ The Mi-4 was a troop carrying helicopter that could accommodate up to fourteen armed soldiers, or 1600kg of cargo or even a Soviet GAZ-69 'Jeep' or an anti-tank gun. Though having a shorter range than the Mi-1, it could reach the northern Galilee region in Israel for the purpose of offloading a platoon of armed troops and return to Damascus-Mezze without refuelling. However, its short range meant that deployment in any airfield other than Damascus-Mezze would have rendered it operationally ineffective. Nevertheless, the SAF never had the intention to utilize the Mi-4 for any purpose other than medical evacuation or troop and cargo transport missions within Syria. On Egyptian advice, trials were made initially to evaluate the feasibility of offloading paratroopers. However, this option was never actually applied operationally.

²⁷⁰ 'Development of Arab Air Forces, April 1955-April 1958', May 1958, IDFA 679-535-2004, p. 25. See also J.W.R.Taylor, Jane's all the World's Aircraft 1962-63 (London: Jane's 1962), p. 298.

²⁷¹ 'Air intelligence report no. MD-586.54', March 1958, IDFA 681-535-2004.

Buildup and reorganization

New air bases

On the eve of the UAR, the SAF's order of battle was concentrated in three air bases: Damascus-Mezze - which was extremely overcrowded due to its dual use for military and civil aviation and was physically constrained with little room for expansion; Neirab (Aleppo) - home to the central flying school whose extensive training flying program restricted the air base's effective use for combat operations; and the air base at Hama, which served as the SAF's main maintenance and repair facility. The consequences of this situation were threefold. First, each of the existing air bases was restricted in its ability to support combat operations due to other functions they were serving. Second, there was little room for expansion at each of them and the basing of a combat squadron (or more) would have necessitated extensive construction of ramps, hangars, housing facilities, ammunition and fuel depots etc. Third, the almost entire combat element of the SAF was centred at Damascus-Mezze, which meant a surprise attack on the base could wipe out its offensive nucleus and eradicate its ability to survive as a fighting force. Therefore, it became essential to start looking for a solution, and the most obvious was to construct a new air base.

A site for the SAF's fourth air base was chosen near the village of Dumeir, northeast of Damascus (coordinates N33 37' E36 45'). By June 1958 the 2500-metre-long runway at the new airport had been completed and trials were made by an EAF MiG-17 squadron to evaluate its adequacy for combat operations. Following a positive outcome one of the two SAF MiG-17 squadrons at Hama (No. 101 squadron, manned by EAF pilots) was redeployed to Dumeir in

November. In August 1959, the new air base witnessed its first fatal accident when a MiG-17 crashed following engine fire, killing its SAF pilot. In the winter of 1959 the 101st squadron returned to Egypt and was replaced by No. 30 squadron, originally based at Abu Suweir.²⁷²

In an attempt to ease congestion at SAF bases, at the end of 1959 the Syrian government decided to construct a new civil international airport that would facilitate the transformation of Damascus-Mezze into a purely military facility. Feasibility studies were conducted about the expansion and modernization of the airfields at Aleppo, Latakia and Kamishli, which were not intended to be used by SAF units on a regular basis but rather to serve as emergency and second-tier air bases in the event of war. In 1958-59 seven emergency airstrips were also constructed, each with a 2000-metre-long compacted earth runway adjacent to the major air bases of Damascus-Mezze, Dumeir, T4, Hamat, Deir ez-Zor, Minakh and Sahl a-Sahra. The intention was to enable aircraft whose base had been damaged by enemy operations, or thought to be targeted for a possible attack, to disperse to a 'shadow' air base nearby. Great care was taken to camouflage the airstrips and surrounding facilities such as an operations room, fuel and ammunition depots and associated infrastructure.

Towards the end of 1960 further work was carried out on the defunct airfield at Rassem el-Abbud (N36 11' E37 35'), where a 2500-metre runway and two hangars were added and at T4 (N 34 31' E37 38'), along the 'T' TAPline oil pipeline, also known as Tadmur) - intended to become the main base for the ill-fated IL-28 bomber squadron - where an old French-era strip was covered by asphalt and lengthened to 2865 metres. Other airstrips at Jabel Jarakh, Humeima, Qutseir, Dar'a and Suweida were used for non-combat purposes such as spare parts sheds, fuel

²⁷² 'Air intelligence report no. 2/59', 25 October 1959, IDFA 893-535-2004.

reserve and ammunition depots and long-term storage of defunct aircraft that had been decommissioned.²⁷³

The countrywide radar network and its limits

Until 1958 the SAF lacked night fighting capability and nocturnal air defence against intruding enemy aircraft due mainly to the non-existence of radar stations and the absence of airborne radars in the Meteor NF-13 fleet. This situation changed radically due to the strengthening of Syrian-Soviet relations in the second half of the 1950s. As early as January 1957, Mosocw acquiesced in Damascus's request for radar stations and acquisition contracts for eight Neisse early warning and control interception units were completed with Poland. The first four units arrived by sea in September-November 1957 and were declared operational in 1959 after the completion of operator and maintenance teams training. Concurrently with the radar acquisition the SAF ordered fifteen MiG-17PF all-weather interceptors to replace the obsolete and unserviceable Meteors. With deliveries complete by May 1958, the SAF positioned the eight stations at Damascus-Mezze, Suweida, Dumeir and Bir Katana. This provided excellent coverage of the western half of Syria, but exposed the eastern half, including the major city of Deir ez-Zor, which was barely covered by the Bir Katana station (the distance of 160 miles between them was more than twice the Neisse operational range of 65 nautical miles).²⁷⁴

During the union with Egypt, three Soviet supplied P-8 stations were brought to Syria by the EAF and positioned at the air bases of Damascus-Mezze, Hamat and Dumeir.²⁷⁵ Initial trials

²⁷³ 'Annual Intelligence Report for the years 1959-60', IDFA 893-535-2004

²⁷⁴ 'Air intelligence report no. 14', 7 October 1957, IDFA 687-535-2004. See also 'Annual intelligence report for the years 1959-60'.

²⁷⁵ 'Air intelligence report no. 21', 24 June 1958, IDFA 687-535-2004

at intercepting civil aircraft were carried out in July but these events were preceded by meticulous pre-planning with crews and equipment at their highest alert standing ready for the intercept. The efficiency of the Air Defence Network (ADN) system in real-time surprise scenarios would have to be proven in instances of foreign military aircraft intruding Syrian airspace without prior warning. This had been the case during the first half of 1961 when the IAF made several successful attempts to penetrate Syrian airspace for reconnaissance purposes using its four Sud Vautour II-BR light bombers/photo-reconnaissance aircraft acquired from France in 1958-59. The Vautour's effective altitude ranged between 40,000 and 45,000 feet, while Syrian air defence gunnery was not effective above an altitude of 31,500 feet (deploying the heaviest 85mm guns), though the effective detection altitude of both the Neisse and P-8 radar stations was between 40,000-45,000 feet, equalling the Vautour's optimal flying altitude.²⁷⁶

On 3 February 1961 a single IAF Vautour overflew Damascus at its maximum altitude photographing the city, the Damascus-Mezze airport, and surrounding installations, including anti-aircraft gun positions. The aircraft was not detected and returned safely to its base at Ramat David in northern Israel. A follow up mission, carried out by two Vautours on 27 July 1961, was even more daring. The aircraft took off from Ramat David at low altitude and turned off their navigational lights on entering Syrian airspace. Then, when overhead the airbases of Damascus-Mezze and Dumeir, they climbed to 2,000 feet for a photo sortie still undetected. During the flight a foreign civilian aircraft was on approach to Damascus-Mezze with air traffic control misidentifying the Vautour as the approaching airliner, assuming that it had not contacted the Damascus-Mezze's tower as a result of faulty radio communication for some reason. Only when

²⁷⁶ IDF Intelligence Corps, 'Annual Intelligence Estimate for 1958', December 1957, IDFA 893-535-2004

the Vautour passed at low altitude over the runway so that the crew could count the number of MiG-17 aircraft parked on Damascus-Mezze's ramps did the air traffic controller realize it was an Israeli aircraft. The IAF pilot reported that lights were immediately turned off over the city. After a short while, air defence units opened fire at the aircraft, which nevertheless made a safe return to Israel. These incidents proved the Syrian air defence network's failure to identify intruding aircraft. However on a positive note, the quick reaction once such an intruder was detected, albeit well within Syrian airspace, and the relatively short time required to alert air defence gunnery could be commended.²⁷⁷

On 29 July 1963, another deep penetration mission was flown by an IAF Vautour to photograph the newly upgraded SAF air base T-4 (Palmyra/Tadmur). This airfield, part of the T-chain of airstrips following the TAP oil pipeline, was in use during the French era. However, at that period it had a mere 1100-metre-long runway suitable for operation by transport aircraft and light planes only. Situated some eighty miles east of Homs, T-4 was destined to become a fully operational air base with a lengthened and paved runway to cater for the expected delivery of Soviet jets.²⁷⁸ Again the aircraft was not detected on entering Syrian airspace, and was able to accomplish its mission unharmed.²⁷⁹

²⁷⁷ IDF Intelligence Corps, 'Annual Intelligence Estimate for 1962', December 1962, IDFA 19-64-2012. See also IAF magazine, August-September 1997, pp. 74-75. The magazine mistakenly quotes the mission's date as 'summer 1964'. The correct date appears in Aloni, Vultures over Israel (Atglen: Schiffer Publishing, 2011), p. 93.

²⁷⁸ 'Annual Intelligence Report for the years 1959-1960', IDFA 893-535-2004.

²⁷⁹ Aloni, 'In a Class of its Own, the Sud Vautour in Israeli Service', Air Enthusiast, July-August 1997, p. 43.

The Baath's 1963 coup and its operational implications

On 8 February 1963 a bloody coup in Baghdad by pro-Baath officers overthrew the country's military dictator, General Abdel Karim Qassem, who had ruled the country since the toppling of the Hashemite monarch in July 1958.²⁸⁰ The success of their Iraqi counterparts prompted the Syrian Baathists, notably members of the so-called 'military committee' of the Baath party, to emulate the Iraqi example and stage a coup of their own. Exactly a month after the coup in Baghdad, on the night of 7-8 March 1963, Syrian army units began moving from their bases towards central government offices in Damascus. Fearing SAF intervention, as Assassa, who reassumed command of the force after returning from his brief exile, opposed the coup, the rebel leaders, with the aid of the military committee, succeeded in bringing to their side anti-aircraft gun units that provided air cover to the tank battalions that stormed Damascus; they were then followed by other army units that were deployed in strategic sites around the capital, including the SAF headquarters in Damascus-Mezze.²⁸¹

A prominent role in the prevention of SAF retaliation against the rebels was played by Hafez Assad who was sent by the 'military committee' to the Dumeir airbase to persuade its commander, Col. Haitham Muhaini, and MiG--17 pilots to defy their orders to attack the

²⁸⁰ On the Iraqi Baath revolution and ideology see John Devlin, The Ba'th Party: A History from its Origins to 1966 (Stanford: Hoover Institution, 1976); Majid Khadduri, Republican Iraq: A Study in Iraqi Politics since the Revolution of 1958 (London: Oxford University Press, 1969).

²⁸¹ For the Syrian Baath ascendancy see: Itamar Rabinovich, Syria Under the Ba'th 1963-66: The Army Party Symbiosis (Jerusalem: Israel Universities Press, 1972); Derek Hopwood, Syria 1945-1968: Politics and Society (London: Unwin Hyman, 1988), pp. 41-43; Van Dam, Nikolas The Struggle for Power in Syria: Politics and Society under Asad and the Ba'th Party (London: Tauris, 1996), pp. 31-47.

rebellious units. To Muhaini's surprise, his pilots accepted the young captain's authority and refused to take off against the rebels.²⁸²

Following the incident the politically-minded Assad shot to prominence. Born on 6 October 1930 in the small northern village of Qardaha to an Alawite family, Assad graduated as a Fiat G-55 pilot from the central flying school in 1955. He spent most of the UAR period in Cairo as part of an exchange team between the Syrian and Egyptian armies, where he met his future comrades in arms Salah Jadid, Ahmad Meer, Muhammad Umran and Abdul Karim Jundi, with whom he founded the military committee of the Baath Party. When the UAR was dissolved Assad was arrested by the Egyptians on suspicion of involvement in the anti-unionist conspiracy, but was released in 1962 and returned to Syria. He was, however, discharged from the air force on account of his Baathist inclinations and given a minor job in the Ministry of Economy. Following the successful 1963 coup, Assad was instantaneously reinstated into the SAF, promoted to Lieutenant Colonel (skipping the rank of a Major), succeeding Muhaini as Dumeir commander, and becoming the most senior SAF representative on the five men coup committee.²⁸³ In December 1964 he was appointed SAF commander-in-chief by his friend Salah Jadid, who had become army chief-of-staff after the coup, at the rank of Maj. Gen. In less than ten years the young Alawite rose in the ranks from a captain to Maj. Gen., leaping three ranks in the process.²⁸⁴

²⁸² 'SAF Officers Handbook', p. 30. See also: Beeri, Army Officers, p. 151.

²⁸³ 'Intelligence Assessment', December 1963, IDFA 19-64-2012

²⁸⁴ Sami Moubayed, Steel & Silk (Seattle: Cune Press, 2006), pp. 148-49.

Assad's and Jadid's promotions were part of the Baath's effort to incorporate as many officers into state institutions and governmental posts so as to tighten its grip on power, alongside widespread purges of 'unreliable' officers. Assad's own appointment as C. in C. came at the expense of Louis Dakkr, two years his senior and one of the SAF's most illustrious pilots, who was also discharged from the SAF in October 1965 amidst a tidal wave of purges and arrests of officers, including pilots. Dakkr was rehabilitated and restored to military and political life in 1968 when Assad, by then Minister of Defence, appointed him as his deputy.²⁸⁵

Nor did the Baath's rise to power eliminate Syria's endemic domestic instability. On the contrary, the ideological and political divergences between the party's various factions sparked numerous clashes and schisms that, at one and the same time, increased the army's domestic role and sucked it still deeper into the roiling political cauldron (in April 1964, for example, the SAF bombed a Muslim Brotherhood mosque in downtown Damascus at the order of President Amin Hafez).²⁸⁶ Small wonder, therefore, that instead of investing their energies in building Syria's military power military officers were overwhelmingly preoccupied with physical and professional survival (and if possible promotion) in the incessant purges, a process that left the SAF (and the army) bereft of its most able officers as promotion was based on political loyalty rather than professional competence (as had been the case in the 1950s).

For its part Moscow, uncertain about the stability, orientation, and political acumen of the nascent regime, preferred to bide its time, and it was not before the end of 1963 that it embarked on a spirited effort to increase the number of new pilots and replace the older MiG-17 day

²⁸⁵ Beeri, *Army Officers*, pp. 154, 197; Cooper and Nicolle, *Arab MiGs*, vol. 2, pp. 164-65; 'SAF Officers Handbook'.

²⁸⁶ Steel and Silk, p. 233

fighters with new MiG-17PF all-weather fighters and the new MiG-21 supersonic interceptor.²⁸⁷ A few of the existing MiG-17 pilots, having been deemed loyal enough, were sent to the Soviet Union to shift to the new aircraft, but only thirty completed the course with twenty-five aircraft ready to fly by the summer of 1964, a meagre ratio of slightly more than 1:1 pilot/aircraft. An acceleration of the ambitious flight training program could not be initiated without possession of a modern jet trainer and it was obvious that Moscow would have to support Syria's request and be involved in the acquisition process. When the Czech L-29 Delfin was chosen for the task, as the Soviets themselves did not have an advanced jet trainer of their own, the delivery of enough aircraft to enable large scale training could not be completed before the end of 1965.

During the year-and-a-half after the coup, only twenty-four new pilots graduated, and it took them another eighteen months to become fully qualified to fly the MiG-21s. However, with the delivery of the first L-29 aircraft at the end of 1965, the next two courses (in November 1965 and December 1966) produced sixty-five new pilots, almost three-times the number in the immediate post coup period. Overall, it took the SAF almost three years to fully recover from the UAR's dissolution and the attendant coup as far as pilot shortage was concerned.²⁸⁸

²⁸⁷ Walter Laqueur, *The Struggle for the Middle East* (Middlesex: Penguin, 1972), p. 166.

²⁸⁸ 'Intelligence Assessment, December 1963', IDFA 19-64-2012; 'Semi-Annual Intelligence Assessment, June 1964', 16 July 1964, IDFA 20-64-2012.

Table 12 – Syrian Air Force Aircraft Inventory 1958-1963 (annual average)

	1958	1959	1960	1961	1962	1963
Combat						
Gloster Meteor F8/PR9/NF13	15	15	15	-	-	-
MiG-15bis/UTI	20	20	20	19	19	19
MiG-17F/PF	75(*)	73(*)	73(*)	30	28	50
IL-28R	-	3	3	3	3	3
MiG-21F13	-	-	-	-	-	9
Total	110	111	111	52	50	81
Transport						
Douglas C-47 (**)	3	3	2	1	1	1
Ilyushin IL-14	3	5	7	7	7	7
Total	6	8	9	8	8	8
Training						
North-American AT-6 Harvard	12	-	-	-	-	-
DHC-1 Chipmunk	28	28	28	26	26	25
Yak-18	8	8	8	8	8	8
Total	56	36	36	34	34	33
Helicopters						
Mil Mi-1	5	5	5	5	5	5
Mil Mi-4	2	5	5	5	5	5
Total	7	10	10	10	10	10
Grand Total	179	165	166	104	102	132

(*) Thirty aircraft stored at Hamat. Fifteen aircraft operated by an Egyptian-manned unit (no. 30 squadron) at

Dumeir.

(**) Owned and operated by Syrian Airways/United Arab Airways under the operational control of the SAF.

Table 13 – Flying Courses Graduation 1958-1963

Period	Course No.	No. of Graduating Pilots
Apr. 1958	4	4
Dec. 1958	5	35
Dec. 1959	6	34
July 1961 (*)	7	4
Jan. 1962 (*)	8	5
Oct. 1962 (*)	9	7
Oct. 1963	10	12
Total		101

(*) Flying courses conducted in Egypt as part of the UAR

6 The road to war, 1963-67

Intermittent clashes with Israel

The formation of the UAR in 1958 boosted the SAF's self confidence due to the EAF's apparent operational support and Moscow's political and military backing, driving it to occasional challenges of the IDF. The first such challenge occurred on 31 January 1960, when the Syrian units moved into the demilitarized zones near the joint border in contravention of the 1949 armistice agreement triggering small arms fire exchanges with the IDF, in which an Israeli soldier was killed. The Israelis responded by attacking the village of Tawfiq, where Syrian soldiers were positioned. On the next morning, an IAF Mystere aircraft modified for the photo-reconnaissance role and escorted by three Super Mystere interceptors was dispatched to photograph the Tawfiq area, and the SAF responded by sending four MiG-17s which overflew the area at an altitude of 20,000 feet to confront them. Eager to join battle the Syrian pilots promptly dropped their under-wing fuel tanks and opened head-on fire on the Super Mysteres. Yet they failed to exploit the mistake of the IAF air controller, who directed the Israeli aircraft below the MiGs at 14,000 feet thus placing them at an inferior position, and the air engagement ended inconclusively with neither party hurt.²⁸⁹ This, however, did not prevent two of the SAF pilots, lieutenants Nicola Khuri and Muwaffaq Daghashani, from boasting to the Syrian press about their 'victory' over two IAF Super Mysteres, which had allegedly been shot down over

²⁸⁹ Meir Amitay, IAF No. 109 Squadron History Book (Tel Aviv: Zmora-Bitan, 1985; Hebrew), pp. 69-70. See also Lachish and Amitay, A Decade of Disquiet, pp 135-36.

Tiberias.²⁹⁰ Khuri, a Christian, was an experienced combat pilot and instructor who had trained on Meteors in Britain and MiG-15s in Egypt.²⁹¹

The next major air encounter took place in mid-March 1962 when, in response to repeated Syrian shelling of Israeli fishing boats and Israeli navy patrol boats in the Sea of Galilee culminating in the heavy shelling of Ein Gev and the Poriya ridge near Tiberias, the Israeli army carried out a large scale operation aimed at destroying Syrian army positions around the village of Nuqeib, on the eastern shore of the Sea of Galilee. The village was located in the Israeli proclaimed demilitarized zone but in 1950 the Syrians invaded the area, taking Israel by surprise, and constructed a fortified array of artillery positions around it. As the Israeli operation evolved into a major confrontation with Syrians renewing heavy artillery fire on the Ein Gev village, in the early morning hours of 17 March three IAF Sud-Vautour bombers accompanied by Mystere and Ouragan light strike aircraft attacked the artillery positions with only partial success.

The attack was not challenged by the SAF due to its inability for night interception,²⁹² but after sunrise two formations of four MiG-17 aircraft each were rushed to the area and an aerial dogfight developed with a similar number of IAF Super Mystere interceptors causing slight damage to the tail of one of the Super Mysteres, superficial enough to enable the aircraft's return to base unscathed. Additional MiG-17 aircraft were observed patrolling over Damascus and the three major air bases of Damascus-Mezze, Dumeir and Hama. During the battle SAF pilots

²⁹⁰ Ibid.

²⁹¹ 'SAF Officers Handbook', p. 18.

²⁹² Aloni, Vultures over Israel, p. 102.

showed courage, willingness to engage, and above average manoeuvrability skills that enabled them to escape safely home.

At noon a couple of MiG-17s were observed at high altitude over the battle zone, probably to assess the damage to the Syrian positions and collect visual intelligence (SAF MiG-17 at the time were not camera equipped). On 20 March, the SAF sent one of its three camera equipped IL-28Rs from Hama air base on a nocturnal reconnaissance sortie. The IAF responded by dispatching a Sud-Vautour 2N night fighter-bomber which chased the IL-28 deep into Syria. When both aircraft reached the outskirts of Damascus, the IAF C. in C. Maj. Gen. Ezer Weizman ordered the Vautour pilot to stop the chase and return to base. The next day the SAF sent a large number of MiG-17 aircraft, estimated at fourteen. Four MiG-17s were seen approaching the Sea of Galilee and were met by four Super Mysteres, but both formations parted without exchanging fire. Three pairs of MiG-17 patrolled over the capital and the air bases of Damascus-Mezze and Dumeir. The high alert status of the SAF was maintained until 25 March 1962.

The Baathist March 1963 takeover took Syrian-Israeli tensions to a new level as the new regime sought to consolidate its grip on power and assert its nationalist credentials in the face of lingering opposition (on 18 July 1963, for example, four SAF aircraft bombed army headquarters in Damascus as part of an abortive putsch by pro-unionist military officers) by embarking on an aggressive anti-Israel stance.²⁹³ This led in short order to skirmishes with Israel, revolving by and large around the National Carrier (*Hamovil Haartzi*), an overly ambitious project to divert waters from the Sea of Galilee to the arid Negev desert in the south of Israel.

²⁹³ Beeri, *Army Officers*, p. 155.

Though the project had no adverse impact on Syria's water use, the Baathists quickly presented it as 'a constant source of danger' not only to Syrian security but to Middle Eastern stability as a whole that had to be swiftly stopped by both political and military means. Making the carrier issue one of the focal points in its propaganda with Egypt, Damascus repeatedly threatened a 'suicidal attack' on Israel in a deliberate attempt to embarrass Nasser, who despite the UAR's breakdown was still widely considered champion of the pan-Arab cause, into extending military support to the supposedly beleaguered Arab 'sister', notwithstanding his explicit and adamant refusal to be dragged into a premature confrontation with Israel.²⁹⁴

In the late afternoon hours of 20 August 1963, a day after killing two Israeli soldiers in an ambush on the Sea of Galilee northern shore and opening artillery fire on Israeli villages in the neighbourhood, eight MiG-17 aircraft were observed patrolling west of Ein Gev at 32,000 feet. The formation was challenged by a couple of IAF Mirage interceptors from the Ramat David air base and an aerial battle ensued during which one of the MiG-17s was hit but apparently managed to return to its base safely. Despite the favourable ratio of 8:2, the remaining SAF aircraft fled towards Damascus-Mezze without even attempting to challenge the two Mirages.²⁹⁵

Both Syrians and Israelis expected an escalation of the already tense situation with the SAF placing twelve MiG-17s on high alert at Damascus-Mezze and the IDF preparing for a large scale operation. The Israelis anticipated that in case of uncontained escalation the SAF might be brought into action and therefore envisaged the possible expansion of the operation to the bombing of Damascus-Mezze and Dumeir, each housing some forty-four aircraft (about two

²⁹⁴ Rabinovich, *Syria under the Ba'ath*, pp. 95-101.

²⁹⁵ 'Summary of Syrian MiG Engagement', 22 August 1963, IDFA 350-135-1967; *Davar*, 21 August 1963, p. 1.

thirds of the total number of SAF aircraft). Though an exact time frame was not set, the IAF estimated that if attacks on both air bases be carried out at night, the SAF would have been unable to defend, lacking night fighting capability. Yet the Syrians seemed to have learnt the lessons of the incident, refraining from sending any aircraft to challenge the Israelis thus leading to a reduction in tension. The relative calm lasted for less than two months when, following a series of artillery exchanges, on 12 November 1963 IAF aircraft bombed Syrian army positions killing seven soldiers and wounding another twenty. The SAF did not respond to this operation but on the following afternoon, when the IAF returned to the area, a couple of MiG-21 were sent and shots were exchanged; the SAF claimed that one IAF Mystere was shot down but all IAF aircraft landed back safely.²⁹⁶

Drawing the Arab states into the picture

The intermittent clashes, though, had the desired result in that Nasser had become sufficiently concerned as to convene on 13-16 January 1964 the first Arab League summit in Cairo to adopt a joint strategy for confronting 'the Israeli aggression'. Within this framework, the summit authorized Damascus to initiate its own water diversion project of the Jordan River estuaries pledging that, in the event of an Israeli attempt to stop this project, the Arab states would resort to force to protect Damascus, not an unlikely eventuality given Israel's adamant opposition to the possible diversion of half of the Jordan waters in contravention of the water sharing plan devised by Eric Johnston, the US special envoy dispatched by President Eisenhower in 1953, whereby 38.5 per cent of the Jordan waters would be used by Israel and only 11.7 per

²⁹⁶ 'Nesher Operation Order no. 55/63', 27 August 1963, IDFA 211-686-1965; Cooper and Nicolle, Arab MiGs, vol. 2, p.165.

cent by Syria (the excess going to Jordan and Lebanon). But while Israel grudgingly accepted the plan, the Arab states rejected it altogether. And while Damascus might have felt that the Cairo summit decision rallied the Arab states behind its militant anti-Israel stance, Jerusalem remained undeterred and by 10 June 1964 the National Carrier had been officially inaugurated.

By way of backing its far-reaching undertaking to back Syria the Cairo summit set up the Unified Arab Command (UAC) to coordinate future collective action. Headed by Egyptian Lt. Gen. Ali Ali Amer and based in Cairo the new outfit was undoubtedly a handy tool in Nasser's ceaseless quest for pan-Arab leadership. Yet it was sufficiently consensual to be bankrolled by the oil rich Gulf states and for the Arab League to approve in its second summit, held in the Egyptian port town of Alexandria in September 1964, both the deployment of Arab troops in the 'confrontation states' (i.e., Lebanon, Jordan, and Syria) in case of need, and the standardization of the Arab armies' weaponry, strategy, and tactics.²⁹⁷ As far as the Syrian armed forces were concerned, this required the appointment of officers 'on the basis of military competence rather than political allegiance',²⁹⁸ something that necessitated a fundamental mentality change. In the words of Tom Cooper and David Nicolle: 'It took a while for the situation in Syria to stabilize sufficiently for the remaining [after the various coups] SAF officers to realize that the business of the military was not in plotting coups and meddling in politics, but fighting Israel'.²⁹⁹

²⁹⁷ For the formation of the UAC see: Moshe Shemesh, 'Arab strategy towards the Arab-Israeli conflict, January 1964 to June 1967', in Moshe Gammer (ed.), Political Thought and Political History: Studies in Memory of Elie Kedourie (London: Frank Cass, 2003); Frederic Hoff, 'The water dimension of Golan Heights negotiations', in Hussein Amery et.al (eds.), Water in the Middle East: A Geography of Peace (Austin: University of Texas Press, 2000); Moshe Gat, Britain and the Conflict in the Middle East 1964-1967 (Westport: Praeger, 2003).

²⁹⁸ Samir Mutawi, Jordan in the 1967 War (Cambridge: Cambridge University Press, 2002), p.58.

²⁹⁹ Cooper and Nicolle, Arab MiGs, vol. 2, p. 166.

The situation of the various Arab air forces in the region differed considerably, as far as size and quality were concerned. Heading the list were the air arms of Egypt (EAF) and Iraq (IrAF) - the largest and oldest, having been established in 1936 and 1933 respectively. Both were sizeable and experienced, though the IrAF was limited in its ability to utilize and maximize its resources in future conflict due to the longer distances from its main air bases to Israel and the small number of bombers capable of carrying out bombing sorties and return to base, range wise. The IrAF's inventory included 21 available bombers (ten long-range Tupolev Tu-16 and eleven medium range Ilyushin IL-28). The EAF fielded a larger number of the same aircraft types (thirty and forty respectively) but also had at its disposal close support aircraft in the form of Sukhoi Su-7 and MiG-17 aircraft that could be used from bases in the Sinai peninsula against armour, artillery and infantry units in the Negev, where IDF ground forces would be concentrated prior to a large scale war. As table No. 15 illustrates, the only Arab air force capable of tackling the IAF independently was the EAF. Consequently, as far as the air war was concerned, it was necessary for the UAC to rely on forging an effective consolidated air power possessing the ability to overpower the IAF and diminish its qualitative edge, of which the UAC's leadership was keenly aware.³⁰⁰ The air forces of Lebanon and Jordan were insignificant parties to the command, while the SAF was larger than both, equivalent to the IrAF, but much smaller than the EAF.

By early 1965 the UAC had established an air arm organizational framework. Headed by an EAF officer, it comprised five branches: an operations branch responsible for planning and coordinating combined air operations against Israel; an air defence department (ADD, also

³⁰⁰ Asher Susser (ed.), Six Days, Thirty Years: New Perspectives on the Six Day War (Tel Aviv: Am Oved, 1999; Hebrew), p. 105.

headed by an EAF officer) - in charge of planning and carrying out the joint air defence strategy and overseeing annual joint exercises; a communications branch; a planning branch headed by an SAF officer - responsible for force expansion, especially aircraft procurement and construction of new air bases; and a human resources and administration branch, whose main responsibility lay with coordinating the training of pilots, striving to harmonize syllaby and aircraft types. This framework was aimed at gaining an optimal synergy and improving the interoperability by reducing the number and increasing the standardization of aircraft types. This was a particularly difficult task with regard to the air forces of Lebanon, Jordan and Iraq where the majority of combat, transport and helicopter aircraft were of British origin. More effective harmonization could be hoped between the EAF and SAF whose entire combat and helicopter inventory by that time was of Soviet origin. The ADD's combat section was headed by an Iraqi officer whose responsibility it was to scramble interceptors when and where hostile intruders were detected by the various radar stations. Another section was responsible for controlling aircraft movements between UAC countries, headed by an SAF officer.³⁰¹

The second essential objective of the UAC (next to consolidating the Arab military forces against 'an expansionist Zionist Israel') was the protection of Arab (Syrian and Jordanian) water irrigation works linked to the water diversion programs. A special sub-branch titled 'the northern air operations group' was established, headed by an EAF officer who was directly responsible to the supreme UAC commander Amer. The group activities, which since its inception were kept to a minimum, ceased almost entirely at the end of 1964, partly due to the SAF's weakness that led

³⁰¹ 'Intelligence Assessment Prior to the 1967 War', p. 93.
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to the practical halt of the irrigation works but also due to inter-Arab conflicts, particularly between Egypt and Syria and between Syria and Jordan.³⁰²

Overall, the UAC's air arm had defined the following areas of responsibility in the event of war with Israel:

- The EAF was responsible for the area south of the Tel Aviv-Jerusalem line, including the southern part of the West Bank (then controlled by Jordan).
- The RJAF and IrAF were responsible for the northern area between the Tel Aviv – Jerusalem line and the Jenin-Haifa line.
- The SAF and LAF were responsible for the area north of the Haifa-Jenin-Tiberias line.

The inclusion of the West Bank within the EAF's area of responsibility, despite its being part of Jordanian territory at the time, stemmed from the UAC's recognition of the RJAF's weakness and inherent inability to operate against Israel on its own. The emergency disposition of the IrAF called for the allocation of two fighter squadrons, a Hawker Hunter unit to be based at Mafrq air base in Jordan, carrying out strike missions within Israeli territory, and escorting the heavy Tu-16 strategic bombers on their long range bombing missions from H-3 air base on the Iraqi-Jordanian border. A second unit comprising MiG-17/21 aircraft was to be deployed to Syria to enhance the SAF's offensive capability. An Egyptian military mission, headed by Gen. Saadi Najib Ali, which concluded a visit to Syria in September 1966, called for Syrian consent to permanently deploy EAF aircraft at Homs and navy units at Latakia. The strained Syrian-

³⁰² Matitahu Maizel, The Golan Heights Campaign (Tel Aviv: Ministry of Defence Publishing House, 2001; Hebrew), p. 23.

Egyptian relations prevented such an option, providing the Egyptian army leadership with yet another excuse to justify its inability, or rather lack of enthusiasm, to come to Syria's aid.³⁰³ For his part Lt. Gen. Ahmad Suweidani, the Syrian commander-in-chief, went to great lengths to clarify that the failure to deploy Egyptian military assets in Syria was due to material constraints, notably lack of sufficient military bases, rather than political differences, claiming that 'imperialist and reactionist forces have an interest to portray the true situation in a distorted fashion so as to harm the unity of the Arab revolutionary forces'.³⁰⁴

³⁰³ Al-Jadid (Beirut), 14 April 1967, MLM Archives (Tel Aviv), Docket no. 4080-586-011.

³⁰⁴ Al-Anwar (Beirut), 21 April 1967, MLM Archives, Docket no. 4082-586-011.

Table 15 - Comparative Strength of Middle Eastern Air Forces in 1967 (*)

	Egypt	Iraq	Syria	Jordan	Lebanon	Arab	Israel
Heavy Bombers	30	10	-	-	-	40	-
Medium Bombers	40	11	-	-	-	51	19
Close support	67	70	45	23	24	229	131
Interceptors	148	32	65	5	-	250	100
Total combat	285	123	110	28	24	570	250
Transport	84	23	12	8	1	128	46
Helicopters	38	49	10	4	7	108	46
Training	90	57	80	9	12	248	43
Grand Total	497	252	212	49	44	1,054	385
Operational air bases	26	11	11	4	3	55	6
Aircrews (**)	525	240	160	55	40	1,020	506
SAM Batteries (***)	32	-	-	-	-	32	5 (****)

* The table includes data for those air forces directly involved in the 1967 war with Israel only. Figures reflect the inventory in early 1967. Data is based on various intelligence reports as well as A Decade of Disquiet, pp. 436-39.

** Includes pilots, navigators, gunners and flight engineers

*** SA-2, Hawk

**** Only four operational batteries. The fifth was used exclusively for training.

Heavy Bombers: Tupolev Tu-16

Medium Bombers: Ilyushin IL-28, Sud Vautour

Close Support: MiG-17, Su-7, Ouragan, Mystere, Magister (armed), Hunter, Vampire

Interceptors: MiG-19, MiG-21, Mirage, Super-Mystere, F-104

Transport: An-12, IL-14, C-47, Noratlas, Stratocruiser, Dove, Heron, Freighter, Tu-124

Helicopters: Mil Mi-1/4/6, Alouette, Sikorsky S-58/Wessex, Super-Frelon, Bell 47

Training: MiG-15, HA-200, L-29, Magister, Chipmunk, Provost, Jet-Provost, Yak-11/18,

Gomhouria

Note: Interceptors can be used for close support missions, and close support aircraft are capable of air to air combat. Trainers can be used for close support missions if armed.

Syrian Operational Planning

The formation of the UAC was undoubtedly the most important element in the evolving security thinking of the nascent Baath regime given the keen awareness of both the political and military leaderships, including the SAF's command.³⁰⁵ Of Syria's inability to confront Israel on its own, an internal Baath memorandum disseminated to senior party members in September 1965 candidly declared that: 'A true and objective assessment of Israel's might and the inevitable danger associated with its military power must come to the conclusion that under the present circumstances no Arab state can confront Israel on its own, and certainly not liberate Palestine'.³⁰⁶

Yet since the Baath regime could not take for granted UAC support in the event of an Israeli-Syrian conflagration due to its strained relations with Nasser, whose hegemonic ambitions were still feared and resented in Damascus, and inter-Arab animosities and rivalries more generally, the Syrian army's operational plans were prepared on the simultaneous assumptions that UAC aid would be forthcoming and that Damascus would have to fight a war on its own. Indeed, despite Syrian claims to the contrary,³⁰⁷ documents captured by the Israelis in the Syrian army headquarters in Quneitra after the 1967 war verified the existence of offensive plans drawn at least a few years prior to the war. Due to the inherent inability of the SAF to engage the IAF unaided, none of the known plans were directed at targets beyond the tactical and operational environment and all had limited aims that included: preventing an IDF advance towards

³⁰⁵ 'Annual Intelligence Assessment', 1 October 1966, p. 41, IDFA 22-64-2012.

³⁰⁶ Abraham Ben-Tzur (ed.), The Syrian Baath Party and Israel (Givat Haviva: Centre for Arab and Afro-Asian Studies, 1968; Hebrew), p. 8.

³⁰⁷ See, for example, Zeev Tzahor, 'The Road to the Six Day War', Maarachot, June-July 1992, p. 40 (Hebrew).

Damascus; assisting the ground forces by engaging IAF aircraft; and providing close support through attack of IDF armour and artillery. However, there was no evidence of a larger scale plan at the strategic level targeting bases and enemy force concentrations behind the operational lines. Examples would have included the city of Haifa and its crucial oil refineries, armour depots in northern Israel, and the important IAF air base at Ramat David. It should be noted in this respect that during the late morning hours of 5 June 1967 six SAF MiG-17s did indeed attack Haifa and the disused airfield at Megiddo, but this was a sporadic rather than a pre-planned operation that inflicted no damage due to the improper use of small diameter bombs.³⁰⁸ It was only after the UAC had existed for a significant period of time that the Syrian army issued a more elaborate offensive plan, finalized on 24 May 1967 – a fortnight before the outbreak of hostilities – that called for deep penetrating SAF operations against strategic targets and was entirely based on the assumption that the Syrian army would be given access to Israel's territory through Lebanese and Jordanian territory and that military cooperation by these states, as well as Iraq, would be a viable option. Overall, three major operational plans were devised in the years prior to the war.

Operation Jihad

Operation Jihad was first devised in November 1965 in response to the large scale IAF operation against the Syrian irrigation works a year earlier and (see below) and Syrian resentment of the IAF's subsequent ability to 'operate on an almost daily basis along the

³⁰⁸ 'Development of the Syrian Air-Force', IDF Intelligence Corps Doc. MD-6-(2)-13, 1979, p. 01-03-02. See also Cooper and Nicolle, Arab MiG-19 and MiG-21 Units in Combat (Oxford: Osprey, 2004), p. 20. The Cooper/Nicolle book erroneously claims that twelve MiG-17 and escorting MiG-19 aircraft were involved. The actual number of MiG-17s was half that number quoted, while MiG-19s had never entered SAF service.

boundaries, sometimes penetrating as deep as 10-20 kilometres inside Syrian territory'. According to Syrian sources, the incursions were made during daylight by Super Mystere or Mirage aircraft and at night by Vautour reconnaissance bombers for the purpose of photographing Syrian army fortifications, troop concentrations and progress of the irrigation project infrastructure.³⁰⁹

The Syrians estimated that the IAF's main targets were the destruction of command and observation posts with the aim of inflicting heavy damage on artillery pieces and tank destroyers (the Syrian army had some eighty SU-100 tank destroyers at its disposal). As they saw it, IAF aircraft would be scrambled from a number of airfields including Nahalal, Ramat David and Haifa. Alternatively, the civil airfields of Megiddo, St. Jean (Acre), Bassa (Betzet) and smaller airstrips at Khalde, Barda and Muqaibile could also have been used. In fact, apart from Ramat David (which was a permanent military base), Megiddo and Haifa (which were secondary emergency airfields), none of these airfields were in operational use by the IAF. They were used by the civil aviation and as emergency military airfields and had no permanent units based there. The majority of the other airfields were long derelict landing grounds dating back to the British Mandate era. In order to encounter this perceived threat, the Jihad Operation plan called for No. 167 regiment to provide anti-aircraft defence. The unit consisted of three companies charged with opening fire on intruding planes flying at 9,000 feet or below while the SAF scrambled its

³⁰⁹ 'Operation Jihad order no. 500/3948', 10 November 1965, captured Syrian documents, MLM Archives. The Syrian document gives a detailed account of the number of IAF squadrons noting that one squadron operated Hunter aircraft and two others operated Spitfire and Meteor F8 aircraft. In fact, Hunters had never been acquired by the IAF, the Spitfires were withdrawn from service as early as 1956, and the last Meteor F8 left IAF service in 1962. This flawed account of IAF strength is illustrative of the low quality of SAF intelligence at the time.

combat aircraft to engage those aircraft flying above 9,000 feet. A warning was issued to all army and air force units stating that ‘the enemy might use NAPALM bombs as well as radioactive, bacteriological and chemical ammunition’.³¹⁰

In line with Syrian air doctrine of the day, Operation Jihad was of a purely defensive and passive nature and included no offensive option such as preventive action against the IAF. It was aimed at defending Syrian army positions along the border and preventing IAF aircraft from threatening the capital. It had never included the option of conducting attacks on IAF airfields or even constantly patrolling in the air in anticipation of approaching IAF aircraft. While the Syrians generally adhered to the plan’s outlines, it was only partially executed.

Operation Tarek was first devised in late 1965 and disseminated to the army’s 12th and 35th divisions in January 1966. In contrast to Operation Jihad it was an offensive rather than a defensive plan aimed at conquering Israeli territory in the upper Galilee region. Being aware of Israel’s quantitative and qualitative military advantage, the operation was based entirely on support from the Lebanese and Jordanian armies. Syrian intelligence estimated that Israel’s air attacks against the irrigation works, particularly the significant operation of 14 November 1964, were merely a prelude to more extensive operations aimed at dragging Damascus to a large-scale confrontation. Such an IDF offensive might include temporary land grab in Lebanon and Syria where the main irrigation works took place, to be followed by a withdrawal in return for international guarantees for the stoppage of Syrian irrigation project.

³¹⁰ ‘Operation Jihad order no. 500/3948’, captured Syrian documents, MLM archives, 10 November 1965)

The two directions of the possible Israeli thrust were thought to be along the Ajar Bridge near Tel Qadi and Tel Abu Khanzir, and from Kfar Shamir to Ashmora via Kibbutz Gonen. Operation Tarek stipulated a preemptive armoured thrust from Tzuweira and the Khuri Orchard towards Safed, Rosh Pina, Ayelet Hashahar and Hulatha, very similar to the Syrian invasion in the 1948 war. Support from the north was to be provided by the Lebanese army, tasked with advancing towards the settlements of Malkiya, Yiftah and Rosh Pina with the aim of cutting off the Hula Valley, and from the east by the Jordanian Arab Legion, which was expected to concentrate the main effort at Latrun with a view to disconnecting the Tel Aviv-Jerusalem road. The estimate of an Israeli order of battle for an attack on Syria assumed four infantry and one armoured brigade, and against Lebanon a single infantry brigade.

Operation Tarek envisaged massive IAF operations at both the operational (i.e. frontier zone) and strategic (the Damascus basin) levels, and almost certain bombardment of SAF air bases deep within Syria. Like Operation Jihad, Syrian intelligence estimated that the Israeli sorties would ensue from such airfields as Haifa, Megiddo, St. Jean, Bassa (Betzet), Rosh Pina and Ein Shemer. Suffice to say that none of these airfields were in either regular or reserve use by the IAF, and it demonstrated poor Syrian intelligence perception of the actual IAF disposition.

As far as aircraft inventory, Syrian appraisal of IAF strength was quite accurate, estimating the total number of fighters at 250 aircraft, including 132 jet aircraft, comprising 70 Mirages (actually 66) and 26 Vautour bombers.³¹¹ Anti-aircraft missile batteries were estimated at between ten to fifteen (only five in use). The Syrians claimed that some of the aircraft carried bombs that contained atomic, chemical and bacteriological substances. This was a fantastically

³¹¹ At that time the entire IAF combat aircraft inventory consisted of jet powered aircraft.

wild assumption that stemmed from guesswork rather than solid intelligence evidence. Though Operation Tarek called for Syrian initiative, the planners took into account a possible Israeli rebound manifested in a deep thrust into Syrian territory by a force comprising at least two tank and one infantry regiments from the Ayelet Hashahar and Hulatha axis. It was imperative for the SAF to intervene in such a scenario to fend off attacking aircraft and disrupt the advancing ground forces.³¹²

Operation Nasser

While operations Jihad and Tarek involved the Syrian army with the SAF playing an indirect, secondary role, Operation Nasser was clearer in the role assigned to that force. Like Tarek it was an offensive rather than defensive plan, involving a series of air attacks on population centres and military installations in northern Israel followed by the advance of one or two infantry divisions. The ground plan envisaged an armour and infantry advance to the northern Galilee, some by crossing the river Jordan using amphibious vehicles; and like Operation Tarek the offensive was to be carried out by either, or both, of the 12th and 35th divisions. The operation's aim was to occupy the area up to the line connecting Baram with Ein Zeitim and Eshed Kinarot; to conquer the town of Safed, severing the so-called Galilee Panhandle; and to clear the Hula Valley from enemy forces.

The air plan was issued on 15 April 1967 to the SAF's combat force, whose squadrons were now organized in accordance with Soviet practice in 'divisions', Nos. 3 (interception) and 7 (interception and close support). The ground plan was circulated to the units a month later - on

³¹² 'Operation Tarek, Battle Order No. 65/4', 6 January 1966, MLM archives docket no. SB/86.140, 15 May 1968.

24 May 1967, a mere fortnight before the outbreak of hostilities. The Syrian general staff realized that the ground plan would fail if it were not preceded by a successful SAF deployment. The two air divisions were thus given the task of defending the advancing army units and destroying IDF armour and artillery pieces in the process while attacking targets beyond the operational lines.³¹³ According to unofficial sources, Operation Nasser took into account a possible invasion of Israel via Lebanese territory so as to avoid direct Israeli reprisal on Syria itself, an idea encouraged by President Nur ad-Din Atassi and chief-of-staff Suweidani, but rejected by Minister of Defence Assad.³¹⁴

Plans were immediately drawn for defensive operations against a possible Israeli offensive and operational plans for offensive initiatives, which might arise from a possible joint UAC operation against Israel. The heightening border clashes between 1964 and 1966 (see below) were seen by Israel as the prologue to the widening of the conflict. Up to this point Syria had been regarded as the most provocative and dangerous element within the UAC, held back merely by Gamal Abdel Nasser's eagerness to avoid direct confrontation with Israel. Consequently, this prompted the IDF to forge three offensive plans towards the end of the decade.

³¹³ 'Operation Nasser - directive issued to nos. 3 & 7 air divisions by Muqadam Ahmad Yassin', 15 April 1967, MLM archives. See also Shimon Golan, A War on Three Fronts (Tel Aviv: Ministry of Defence Publishing House, 2007; Hebrew), pp. 48-49.

³¹⁴ Cooper and Nicolle, Arab MiGs, vol. 3, p. 174.

Weapons Procurement

Combat aircraft

During the UAR's short existence the SAF, then under the EAF's command, asked Moscow for a MiG-19 squadron only to have its request refused. After the dissolution of the union the request was finally abandoned as the SAF opted for the MiG-21, far superior to its forerunner which had been disliked by EAF pilots, considered difficult to fly and maintain and suffering from a limited range and payload.³¹⁵ When the MiG-17 became obsolete by the mid-1960s, and the MiG-21 was found better suited for the air superiority role, the SAF sought to introduce a supersonic light attack aircraft. This would gradually replace the MiG-17 and compensate for the lack of a dedicated bomber squadron. No longer part of the UAR but streamlining its operational requirements with those of the EAF, as both countries were founding members of the UAC, the type chosen was the Sukhoi Su-7, in wide use by Warsaw Pact members.

The Su-7 was a tactical fighter-bomber that took to the air for the first time in September 1956, followed by the definite production version, airborne in March 1958. The assembly of the first experimental production aircraft commenced in 1957, and by May 1958 the first production aircraft had been delivered to the Soviet Air Force, achieving initial operational capability in 1960. Though very powerful and easy to fly, the Su-7 was far too heavy to be an efficient aircraft for air combat. It also lacked adequate armoured protection around the cockpit area and its fast

³¹⁵ 'IAF Intelligence Report No. 7/60', 27 December 1960, IDFA 893-535-200. See also Nordeen and Nicolle, Phoenix over the Nile, p. 184.

bombing runs prevented the pilot from accurately seeing and aiming at targets when a repeated attack approach was required.

Production of an export model, designate Su-7BMK, began in 1965 and the first aircraft delivered to the EAF in July 1966 intended to gradually replace the MiG-17.³¹⁶ The SAF placed an order for forty Su-7BMKs in early 1966 with deliveries planned for mid-1967. The June 1967 war, however, delayed deliveries, and in November of that year the first twenty aircraft were still being assembled with the first squadron No. 53 attaining full operational capability as late as the summer of 1968.³¹⁷

Transport and Helicopters

In July 1964 East Germany delivered the first of five Ilyushin IL-14 transport aircraft to Syria. This was a VEB built model with a large cargo door replacing the single DC-4 cargo aircraft that Syrian Arab Airways operated but was lost in a crash in Congo in 1960.³¹⁸ The DC-4 freighter was the most effective cargo aircraft at the SAF's disposal and following the loss it was deprived of an aircraft of identical capabilities until the IL-14's arrival.

Relations between the Syria and East Germany had warmed since the state's formation in 1949. However, both countries had developed extremely limited economic ties during the

³¹⁶ Yefim Gordon & Dmitriy Komissarov, *OKB Sukhoi* (London: Ian Allan, 2010), pp. 116-36.

³¹⁷ 'Reorganization of the Syrian Air Force', Special Report, 12 November 1967, IDFA 37-64-2012

³¹⁸ VEB is an acronym for Volkseigener Betrieb, the largest industrial enterprise of East Germany during Communist rule. VEB built IL-14 transport aircraft under license from the Soviet design bureau Ilyushin.

1950s.³¹⁹ East Germany also refrained from direct arms sales and/or dispatch of advisors to train the Syrian army. This was most probably done under Moscow's orders in order to circumvent harming the delicate relationship with West Germany and avoid undesirable implications for Syria attending the Hallstein Doctrine.³²⁰ Since the aircraft were formerly operated by the national airline Interflug, they were not considered 'military equipment' per se and consequently did not arouse any opposition to their sale in either West Germany or Israel. In fact, the purchase went virtually unnoticed by the IAF intelligence, possibly because the aircraft were seen as destined for Syrian Arab Airlines, as its active fleet of Douglas C-47 Dakotas dwindled to just one or two operational aircraft with the IL-14 considered its ideal replacement by many airlines in third world countries.

East German-Arab relations accelerated following the establishment of diplomatic relations between West Germany and Israel in May 1965. A few months before this momentous event East German leader Walter Ulbricht visited Egypt where he held talks with President Nasser under whose invitation the visit took place. Nasser's aim was to pressure Bonn by signalling Cairo's willingness to recognize East Germany and to this end he urged Ulbricht to visit Damascus and forge stronger economic and military ties with Syria. Though the visit failed to materialize, relations between the two countries gradually deepened. On 16 September 1965

³¹⁹ Nina Berman, German Literature on the Middle-East (Ann Arbor: University of Michigan Press, 2011), p. 191.

³²⁰ The Hallstein Doctrine was employed by West Germany during the years 1955-70. It called for the cessation of diplomatic and economic relations with any country that established such relations with East Germany.

an agreement was reached to open consulates in both capitals, and on 15 November 1966 an East German cultural centre opened in Damascus.³²¹

Recognizing Syria as a potential anti-Western ally, Ulbricht ordered Interflug to release four additional IL-14 aircraft, which were in turn delivered in January and December 1966, bolstering the SAF's transport fleet to twelve aircraft. This action compensated for the final withdrawal of the Dakota in early 1967 and the loss of an IL-14, which crashed en route from Hama to Damascus-Mezze due to multiple bird strike on 19 April 1967, killing the pilot (two crew members managed to parachute safely).

Only in May 1969, after East Germany had begun supplying the SAF with MiG aircraft following the 1967 war, was Damascus ripe to establish full diplomatic relations with East Berlin.³²² While the transport fleet multiplied and underwent renovations, the modest helicopter unit, part of the Sixtieth Squadron at Damascus-Mezze, remained static at ten helicopters, five each of the Mi-1 and Mi-4 models. In May 1964 one Mi-1 was lost at Tadmur in an accident, but no replacement helicopters were ordered and the SAF would not expand the rotary section of its transport element until well after the 1967 war.

³²¹ Siegfried Bock, Ingrid Muth & Hermann Schwiesau, DDR Aussenpolitik - ein ueberblick (Berlin: LIT Verlag, 2010), pp. 135, 138.

³²² Daniel Gerlach, Die Doppelte Front (Berlin: LIT Verlag, 2006), p. 67.

Table 14 - Aircraft Acquisition from the Soviet Bloc

Year	Aircraft Type	Quantity	Source
1963	MiG-21F13	30	Soviet-Union
	Total	30	
1964	MiG-21F13	20	Soviet-Union
	L-29 Delfin	5	Czechoslovakia
	Ilyushin IL-14	1	East-Germany
	Total	26	
1965	L-29 Delfin	20	Czechoslovakia
	Total	20	
1966	MiG-21F13/U	20	Soviet-Union
	MiG-21FL	20	Soviet-Union
	MiG-15UTI	10	Poland
	Ilyushin IL-14	4	East-Germany
	L-29 Delfin	15	Czechoslovakia
	Sukhoi Su-7	40 (*)	Soviet Union
	Total	109	

(*) – Delivered after the 1967 war

Training

Following the withdrawal of the Meteor fleet and the transition to an all-Soviet fighter aircraft force by the late 1950s, the training syllabus changed accordingly. The DHC-1 Chipmunk remained the only remnant from the British era serving as a primary trainer, with cadets progressing to the MiG-15UTI for advanced training and transition to Soviet jet types. The MiG-15, however, survived for only a very brief period as the SAF's front line fighter and was replaced from 1958 onwards by the MiG-17, for which no two-seat training version was available. The MiG-15UTI was useful as an OTU type for pilots on transition to the MiG-17 but could no longer provide adequate advanced training for the modern MiG-21.

The solution was found in the L-29 Delfin, produced in Czechoslovakia since April 1963, which became the standard advanced jet trainer for the entire Eastern Bloc including the Soviet Union itself. Being of rugged and simple structure, the aircraft was easy to fly and maintain. The trainee pilot sat in an isolated forward cockpit separated from the instructor in the back seat, with his own independently operated ejection seat. This enabled the trainee pilot to experience the feeling of operating a modern fast fighter aircraft. The L-29 had an option to carry weapons, a total of 200kg of ammunition, including bombs, rockets or missiles. However, this option was discarded by the SAF. It had placed an order for forty aircraft in 1963 with the first five arriving at the central flying school on 11 April 1964 and the remainder during the next two years. Despite the L-29 taking over, the SAF acquired ten MiG-15UTI operational training aircraft from Polish Air Force stocks and these arrived in August 1966 to make good for losses in accidents and attrition due to age. Also acquired from Czechoslovakia in 1958-59 were a small number of Super Aero 45 twin-engine light planes.

With the introduction into service of the MiG-21, several aircraft of the MiG-21U training version were purchased and enabled direct conversion from the L-29 to the MiG-21F and FL fighters. The Su-7 acquired in 1967 did similarly have a dual-seat trainer version (the Su-7U), and like the MiG-21U enabled the student pilot to convert from the L-29 to one of the two operational combat types before attaining sufficient experience to be able to join an operational squadron.³²³

Table 16: Syrian Air Force Aircraft Inventory 1963-1967 (annual average)

	1963	1964	1965	1966	1967(**)	1967 (+)
Combat						
MiG-17F/PF	49	49	49	55	45	55
MiG-21F13/U	6	25	50	45	50	65
MiG-21FL		-	-	-	15	12
Ilyushin IL-28R	3	3	3	3	3	1
Sukhoi Su-7BMK	-		-	-	-	20
Total	58	77	102	103	113	153
Transport						
Douglas C-47B (***)	1	1	1	1	-	-
Ilyushin IL-14	7	8	8	12	11	8
Total	8	9	9	13	11	8
Training						
DHC-1 Chipmunk	25	25	25	25	25	25
Super Aero 45 (****)	5	5	5	-	-	-
Yak-11	-	10	10	10	10	10
Yak-18	-	10	10	10	10	10
MiG-15UTI	15	15	15	10	15	14
L-29 Delfin			11	21	20	17
Total	45	65	76	76	80	76
Helicopters						
Mil Mi-1 (*****)	5	5	4	-	-	-
Mil Mi-4	5	5	5	10	10	10
Total	10	10	9	10	10	10
Grand Total	121	161	196	202	214	247

(*) Average serviceability rate 85%

³²³ 'Acquisition of Aircraft from the Eastern-Bloc 1956-66', 11 December 1966, IDFA 36-64-2012

(**) January-4 June

(***) Reserve aircraft seconded from Syrian Arab Airlines, possibly no longer operational

(****) Although used for multi-engine training, could also have been used as light

transports

(*****) Possibly withdrawn from use and stored.

(+) July-December

(++) MiG-21F13, FL & U

(+++) Used for photo-reconnaissance missions only

Table 17 - Flying Courses Graduation 1963-1966

Period	Course No.	Graduating Pilots
Oct. 1963	10	12
Nov. 1964	11	12
Nov. 1965	12	34
Dec. 1966	13	31
Total		89

Note: Due to the 1967 war, the annual flying course for 1966 was not completed

Expansion of Infrastructure

The risk of air attacks on its few bases during the second decade of its existence, and the rapid growth of the force following the influx of new aircraft from the Soviet Union, expedited an infrastructure expansion. The main air base in Damascus-Mezze, shared with civil aviation and serving as Syria's primary international gateway, suffered from acute lack of space and operational facilities. Having only a single runway, 2,545 metres long, it was only capable of handling medium jet aircraft of the first generation like the Comet or Caravelle, which in the late 1950s began to replace propeller engine aircraft in international air transport. The runway was,

however, inadequate for the larger jets of the second generation such as the Boeing 707 or Douglas DC-8. These aircraft were widely used by most international airlines from 1960 onwards and required runways of at least 3,000 metres.

The first priority was, therefore, to relieve Damascus-Mezze of its civil aviation obligations so as to enable uninterrupted exclusive use by the SAF. The urgency stemmed from the inability to effectively operate military and civil aviation under one roof, and the restrictive nature of the airport's location adjacent to the city, which prevented extension of the runway. In 1963, with East German assistance, the government decided to build a new international airport for Damascus some 25 kilometres southeast of the capital, situated between lakes Atiba and Hijana. It comprised two parallel runways, each some 3,700 metres long, enabling unrestricted use by the heaviest aircraft to long range destinations in North America and Asia. By late 1966, the first runway and associated aircraft aprons, as well as the terminal building had been completed. The airport only became fully operational after the 1967 war, and thus Damascus-Mezze continued to serve as a major air base when war broke out.³²⁴

The infrastructure development momentum also encompassed the airfields of Kamishli, Seiqal, Marj Ruheil, Dumeir and Halab (Nejrab). Kamishli, which was one of the airfields inherited from the French era, was earmarked for development into Syria's third international airport of entry. Situated close to the Turkish border it boasted a scheduled service to Baghdad and Mosul in Iraq by SAA's DC-3 and later DC-4 aircraft, initially twice weekly, and increasing to daily service in the early 1960s. Difficult access by road and increased economic magnitude, highlighted by enhanced agricultural production in the Jezeera district and the exploration of oil

³²⁴ Al-Majala al-Askaria (Damascus), May 1963, pp 68-74. See also 'Intelligence Assessment Prior to the 1967 War', August 1967, p. 50.

resources at Karatshuc, led to the extension of the runway to 1,730 metres and construction of a new control tower. Though not a permanent SAF air base and operationally restricted by its relatively short runway and the proximity to the Turkish border, Kamishli was considered an emergency dispersal airfield to which aircraft could be evacuated in case of IAF attacks on air bases in the central part of the country.³²⁵

The more important airfields at Seiqual and Marj Ruheil were upgraded in 1966. The runways were each 2,440 metres long and were coated with asphalt, thus enabling unrestricted operations by jet aircraft. The two airfields had eight revetments capable of housing MiG-21 aircraft, and SAF MiG-17 and 21 aircraft were routinely dispersed to them prior to the 1967 war. Dumeir air base, which became permanent home to two MiG-21 squadrons in the mid 1960s, underwent development work that added increased parking space for aircraft and associated hangars and pens. It also had a parallel taxiway, which facilitated quick movement of aircraft from their parking areas to the runway. In Halab air base the runway was extended to nearly 2,900 metres and it could house up to fifteen MiG-21 size aircraft in revetments, which were connected to the single runway for quick alert response.³²⁶

³²⁵ Al-Majla al-Askaria, June 1963, pp 51-55.

³²⁶ 'Intelligence Assessment Prior to the 1967 War', pp. 50, 117.

Defending the Syrian water diversion project 1964-66

Incensed by the completion of the Israeli National Carrier in June 1964, the Arab League decided in its second summit (in September 1964) to hasten the Syrian irrigation works so as to deny Israel of the Jordan River's waters. A month later, on 7-9 October, the Syrians opened fire on Israeli bulldozers working in the southern demilitarized zone and the IAF responded by overflying the Syrian positions at low altitude, albeit without opening fire. By the beginning of November, both sides had added tanks to their artillery units in the area and tension was on the rise again. On 13 November, while an Israeli patrol drove along the road opposite the Syrian position at Nukheila, artillery fire was opened that quickly turned into a barrage from guns, tanks and mortars. By noon the IAF headquarters had increased the alert for a possible retaliation and on 14:45 the first aircraft departed from the three main IAF air bases of Hatzor, Tel Nof and Ramat David. Half an hour later SAF MiG-21 aircraft were seen on radar taking off from Dumeir towards the battle zone but by the time they arrived a ceasefire had been arranged by UN observers. During the ensuing thirty-five minutes the SAF did not intervene, probably realizing the futility of confronting seventeen patrolling Mirages and nineteen attacking aircraft. This was far beyond the capabilities of the few MiG-21s ready to scramble.³²⁷

The seriousness of this operation, which involved nearly forty Israeli aircraft - the largest aircraft concentration against Syria since 1951 - went almost unnoticed within the SAF. No aircraft were scrambled, neither for interception of the Israeli aircraft nor for reciprocal bombing of IDF positions along the border or an attack of IAF bases. In a briefing of the general staff, the IDF's intelligence corps head of research, Colonel David Carmon, emphasized that despite being

³²⁷ 'Summary Report of the 13 November 1964 incident', IDFA 103/53/67.

equipped with advanced aircraft and modern weaponry the SAF's primary mission remained the defence of the regime.³²⁸ The following day an IAF Vautour II-B photo-reconnaissance aircraft, escorted by a couple of Mirage interceptors, made an intelligence gathering sortie over the area but only four minutes after it had crossed the border back to Israel did the SAF scramble four MiG-21 aircraft. Even these refrained from approaching the border, instead maintaining a distant patrol pattern over Damascus for fear that the reconnaissance sortie was only a prologue for another round of offensive IAF operations.

On 15:10 four more MiG-21s were detected on radar flying towards the border. They were met by a couple of Mirages and a battle ensued during which the SAF aircraft were chased thirty kilometres deep into Syria. One of the MiGs was hit in the belly (where the fuselage centre fuel tank is located) but managed to return safely to base. One of the IAF pilots noted that both MiGs failed to drop their auxiliary under-wing fuel tanks (an action preceding an air battle to ease the aircraft's weight and increase manoeuvrability). The Syrian pilots did not use the newly delivered Atoll AAMs save for one missile (each MiG-21 carried two) that was fired from a too distant ineffective range, while the IAF aircraft were already on their way home at low altitude. The four Mirage auxiliary fuel tanks, which were dropped over Syrian territory when the battle started, were collected by the Syrians and displayed to the media as 'downed IAF aircraft debris'. Damascus Radio boasted the supposed shooting down of one of the IAF Mirages as a result of a direct hit.³²⁹ Carmon reported that in a radio conversation between the Syrian front commander and headquarters, intercepted by IDF intelligence, the former admitted that the SAF was inferior to its opponent. As far as Israel was concerned, the large-scale IAF action achieved

³²⁸ Cohen, Defending Water Resources, p. 109.

³²⁹ Ibid, pp. 110-12.

perfect results forcing Syria to gradually halt the entire water irrigation project. This decision was backed by the third Arab League summit in Casablanca (13-17 September 1965), which, however, encouraged UAC members to devise a wider plan for the destruction of Israel by shortening the preparation phase for an overall war by two years (from five to three).³³⁰

The failure to deter the IAF from attacking Syrian forces along the border proved to the Baath leadership once more the inefficiency of the SAF as a strategic tool in the wider context of handling the Syrian-Israeli conflict,³³¹ leading President Atassi to complain (in a Cairo meeting on 26 May 1965) the EAF's failure to come to Syria's aid saying that he had expected real UAC involvement in deterring the IAF from operating freely over the demilitarized zones.³³²

The 1966 Neo-Baath coup and the slide to war

For all its nationalist anti-Israel exertions the Baath regime failed to rally the Syrian people behind its leadership, being viewed by most of the population as an anti-Islamic, Marxist secularist dictatorship. Manifesting itself in widespread unrest in 1964-65, this resentment forced the regime to employ heavy-handed measures against its subjects that did not eschew firing on protestors and shelling praying sites, notably the Hama main mosque. In an attempt to arrest this deterioration and regain public trust, on 23 February 1966 a group of officers launched the thirteenth coup in Syria's brief independent existence, only to be torn again by internal rivalries between the so-called 'civilian' and 'military' factions of the Baath, the latter including SAF C.

³³⁰ Ami Gluska, Eshkol, Give the Order! (Tel Aviv: Maarachot/Ministry of Defence Publishing House, 2004; Hebrew), p. 116.

³³¹ 'Intelligence Assessment', 6 September 1966, IDFA 36-64-2012, p. 3.

³³² Shemesh, From the Nakba to the Naksa (Beersheba: Ben-Gurion Research Institute, 2004; Hebrew), p. 160.

in C. Assad who had just returned from medical treatment in London of the wounds sustained by his 1956 landing mishap. Though deeply involved in the initiation of the coup and ignoring President Atassi's request for air support against the rebels, Assad was alleged to have refrained from unleashing the SAF against the civilian faction so as to keep the force as politically disengaged as conceivably possible.³³³

Different accounts of the coup were published at the time. The IDF's official military affairs magazine cited a senior IDF intelligence officer asserting that the SAF was deeply involved in the coup and that its aircraft actually bombed opposing army units under Assad's direct orders.³³⁴ This view was echoed by Eliezer Be'eri, a renowned historian of Arab civil-military relations, who went so far as to claim that not only did the SAF not distance itself from the coup it but was the most actively involved supporter of the insurrectionist officers.³³⁵ Baath history scholar Itamar Rabinovich similarly stated that 'the support of Hafiz al-Asad and the air force served as an ultimate guarantee of the rebel's victory',³³⁶ while Syrian affairs historian Moshe Maoz joined his colleagues by opining that there was no doubt the coup's success was assured by Assad and 'his' air force's full support.³³⁷

On 8 September, a follow-up coup was hatched by Major Salim Hatum, Salah Jadid's right hand man and one of the February coup instigators. Ideological, ethnic but also personal differences between the former partners (Jadid was an Alawite, Hatum a Druze) were the catalyst for the new wave of restiveness within the Baath Party. Hatum had tried to court Assad hoping

³³³ Seale, *Asad*, p. 102.

³³⁴ Lt. Col. [Shlomo] 'Marom', 'Between Revolutions', *Maarachot*, August 1966, p. 26. The author was a colonel at the IDF Intelligence Corps's research department, who had served in numerous capacities including head of the Syrian section prior to the 1967 war.

³³⁵ Be'eri *Army Officers*, p. 165.

³³⁶ Rabinovich, *Syria under the Ba'th*, p. 202.

³³⁷ Maoz, *Assad, the Sphinx of Damascus* (Tel Aviv: Dvir, 1988; Hebrew), p.45.

that the SAF's involvement would help ensure the coup's success, but Assad remained loyal to Jadid (at least for the time being). In May 1966, when Jadid widely believed to be fast losing his grip on the party, Assad threatened to bomb army units at the Katana and Kasswa camps when he suspected them of plotting to march on Damascus and topple Jadid.³³⁸ When Hatum detained President Atassi and chief-of-staff Suweidani, he was warned by Assad that the SAF would be ordered to bomb the Druze region (the region's capital Suweida was Hatum's birthplace) unless he released the two men. Eventually Hatum's coup failed and he found asylum in Jordan until the 1967 war broke out, when he returned to Syria to join the fighting; but Assad was too suspicious to allow him any further meddling in political affairs, having him executed on 26 June 1967.³³⁹

Two of the failed Hatum coup supporters were the pilot Ismail Atrash and his brother Fuad Atrash, a non-pilot, both SAF officers from the Druze region. Born in 1932 in Suweida, Ismail was considered an able MiG-17 pilot having spent time in the Soviet Union flying the MiG-17/21 in 1958 and 1963, later serving at Damascus-Mezze air base in various commanding duties. Both brothers were arrested in October, taken to the infamous Mezze prison (not far from the air base), tortured and later hospitalized under Assad's instructions. Over 520 officers, many of them serving in the SAF, together with 2,000 civilians, all of them Baath Party members, were arrested in the biggest purge ever to take place in Syria. This purge depleted the SAF's ranks at a critical juncture.³⁴⁰

Following the Hatum putsch the position of the SAF and its C.in C. within the Baath's new leadership was strengthened considerably. This enabled Assad, who became minister of

³³⁸ Al-Yawm (Beirut), 12 May 1966, p. 1.

³³⁹ Beer, Army Officers, pp. 168-69; Maoz, Assad, p. 46.

³⁴⁰ Al-Shams (Beirut), 25 October 1966, p. 1; 'SAF Officers Handbook', p. 1.

defence after the February coup in addition to his SAF command, to foster a new policy of retaliation and aggression against Israel from which the SAF had refrained up to that time, chiefly because of its incompetence. The main force chosen to lead the fight against Israel was the Syrian-backed Fatah, established in the late 1950s in Kuwait by a group of Palestinian activists, in the form of a so-called 'popular guerrilla war'. The Syrian leadership hoped that, in the face of Nasser's reluctance to confront Israel, this warfare tactic would enable the Syrian army to conduct operations against Israel by proxy thus avoiding an all out war, which the Syrians knew, would not be supported by Nasser at that stage. This led to a power struggle between Assad and the party's strongman Jadid, leading to further unrest and tensions, which in turn politicized the SAF and its officer corps still further.³⁴¹

A direct, albeit covert, outcome of the neo-Baath coup on Soviet-Israeli relations has been overlooked by most scholars. With Jadid representing the Socialist-Marxist faction of the party and promoting the participation of the Syrian Communists in his government, Syria became increasingly reliant on Moscow. This had a detrimental effect on Soviet-Israeli relations resulting in a growing schism between the two countries. Moscow's backing of the neo-Baath regime resulted in an unprecedented propaganda offensive on Israel from May onwards culminating in the Soviet media describing Israel as western imperialism's 'strategic base' in the Middle East and while spreading false allegations of an IDF buildup along the Syrian-Israeli border and warning off 'all those who plot to topple the regime in Syria'. Relations would sink to their lowest ebb in the immediate wake of the 1967 war with the severance of diplomatic

³⁴¹ In September 1970 Assad would prevent the SAF from providing air cover to the Syrian armoured force that invaded Jordan to help the Palestinian organizations to topple King Hussein, an action strongly supported by Jadid. In doing so Assad contributed to the invasion's failure and brought about Jadid's demise.

relations with Jerusalem. According to former Israel diplomat Yossef Govrin, Moscow's staunch support for the neo-Baath was driven by the hope of building Syria as its second most important regional ally (after Egypt) in the wider context of the Cold War and basing warships in Syrian ports to dissuade the US Sixth Fleet from intervening in any future conflict with Israel.³⁴²

The 14 July 1966 incident

On 13 July 1966 an IDF command car on a patrol mission north of the Sea of Galilee triggered a land mine causing the death of two soldiers and a civilian. The following day, on 16:00, the IAF attacked equipment used by the Syrians to divert the waters of the river Jordan, as well as anti-aircraft positions on the Golan Heights northeast of the Ein Gev kibbutz. In total, eleven sorties were carried out dropping four tons of bombs and NAPALM ammunition, followed by strafing and patrolling missions in anticipation of SAF reaction. On 16:23 four MiG-21 aircraft were detected taking off from Dumeir air base armed with Soviet Atoll AAMs. Four IAF Mirages were directed towards the approaching aircraft and one of them shot down one of the MiGs. Its pilot was seen parachuting to safety. Additional MiG-21s were scrambled but no contact with the IAF aircraft was made except for a brief encounter that ended inconclusively.

On 18:20 Damascus Radio announced that the SAF managed to shoot down two Israeli Mirages, admitting the loss of one Syrian aircraft. The incident was broadcast on Amman Radio with the commentator adding that the RJAF was placed on high alert. For his part, a Damascus television announcer told his audience (on 15 July) that 'Mordechai Hod [IAF commander] can boast as much as he wants, and Yitzhak Rabin [IDF chief of staff] may convene a thousand press

³⁴² Yossef Govrin, Israel-Soviet Relations 1953-1967 (Jerusalem: Magnes Press, 1990), pp. 102, 235, 249-50.

conferences, but all this will not change the truth.’³⁴³ Yet following the incident - the first in which a Mirage shot down a MiG-21 - Syria halted the water diversion program.

The LCT incident

During the early morning hours of 14 August 1966, just before dawn, an armed landing craft (LCT) of the Israeli navy struck a sandbank near the eastern shores of the Sea of Galilee while on a routine patrol mission during a foggy night. Armed with 20mm machine guns, the vessel was stationed on the Sea of Galilee to provide local fishermen with a basic means of defence, the navy lacking a more powerful craft for that mission.³⁴⁴ To add insult to injury, on 04:54 Syrian positions along the eastern shore began firing at the vessel, causing injuries to three sailors. About an hour later a couple of IAF Mystere aircraft from the Ramat David air base were scrambled to perform low altitude flights over the shore for the purpose of deterrence, and the fire stopped on 07:00.

The incident was spotted by Syrian intelligence officers through their looking glasses and the information was promptly relayed to Damascus, noting that the boat infringed the agreement which stated that no Israeli vessel would approach the Syrian shore at a distance of 250 metres or less. This led the SAF headquarters to try and destroy the LCT from the air, and on 09:00 four MiG-17s escorted by a couple of MiG-21's appeared overhead and rocketed the LCT and another vessel that came to its rescue. Both vessels opened fire on the attacking aircraft shooting down

³⁴³ ‘Daily Intelligence Report for 14/15 July 1966’, IDFA 220/368/68. For Arab media reaction to the incident see: ‘15 July 1966 report’, IDFA 30/238/70. See also Eliezer Cohen, The Sky is not the Limit (Tel Aviv: Maariv, 1990; Hebrew), p. 249.

³⁴⁴ The smallest combat vessels in Israeli service were torpedo boats that could not be effectively deployed on the Sea of Galilee.

one of the MiG-17s, which crashed into the lake. Its pilot Ghazi Wazwazi managed to eject and was later recovered by Syrian troops.³⁴⁵ Due to the SAF aircraft approaching at low altitude, they avoided detection by the IAF radar. The IAF immediately scrambled Mirage interceptors, but by the time they arrived at the scene the attacking aircraft had already turned back to Syria. Subsequently two additional MiG-21 aircraft were detected flying towards the Sea of Galilee.

In the ensuing battle one of the MiG-21s was shot down and crashed, resulting in the death of its pilot.³⁴⁶ Later that morning, Syrian radio broadcasted an official communiqué issued by Assad stating that ‘Syria will not restrict itself to defensive operations, but will attack specific targets and bases of aggression within the [so called] occupied zones’. It also added that Syria had implemented its new policy of using the SAF to prove to the Arab nation that Israel’s claim to air superiority was groundless.³⁴⁷

This incident almost led to an Israeli activation of operation ‘small focus’ (Moked Katan) - a scaled down version of the general attack plan on the SAF that was to be carried out in June 1967. The following day, the Ramat David air base was placed on high alert in anticipation of a possible attack on the SAF air bases of Damascus-Mezze, Dumeir and Seiqal, where 80 per cent of the SAF’s force was based. The tension continued throughout the week, though the SAF refrained from sending out its aircraft. It was only on 26 August that the LCT was finally towed

³⁴⁵ Wazwazi was a MiG-21 pilot with the No. 77 Squadron during the 1967 war. According to Syrian sources he was responsible for shooting down an IAF Super Mystere killing its pilot Lt. Dan Segri on 5 June 1967 while attacking the Dumeir air base. Israeli sources, however, claimed that Segri was downed by anti-aircraft fire. Author’s e-mail correspondence with Lt. Col. Motti Havakuk, Head of the IAF Air Historical Branch, 6 January 2013.

³⁴⁶ Zvi Vered and Meir Amitai, ‘The First Jet Squadron’, IAF internal publication, p. 37.

³⁴⁷ United-Nations Council Records for 1967, UN Doc. S/7477, 26 August 1966

away to its anchor.³⁴⁸ On the night of 3 September nine Syrian Navy frogmen succeeded in pulling the SAF pilot's body, still in the intact shattered cockpit section, out of the water, in addition to some parts of the wreckage, for which they were awarded a citation, operating 'under hostile fire'.³⁴⁹

The LCT incident was a grim example of the SAF's dismal operational state. Though attacking within Israeli territory for the first time since the 1948 war, and having the benefit of surprise on its side with five (then two aircraft) used against a poorly armed slow boat, the Syrians failed to cause any substantial damage and lost two aircraft in the process. Pro-Syrian commentator Patrick Seale chose to term the failed attack mission 'a suicidal mission'.³⁵⁰ The only possible explanation for Seale's comment was his desire to whitewash the failure of the SAF and its commander, his personal friend Assad. In fact, there was no professional justification for failure in this case: with the aircraft coming in low and fast and having the advantage of being able to operate freely they could have easily hit or even sink the boat and still manage to return to base before the arrival of the Israeli aircraft. This sorry state of events was, however, not reflected by Assad's statement on Damascus Radio in which he praised SAF pilots for performing their mission in the best possible way.

The final straw: the 7 April 1967 incident

On 7 April 1967, which was a Friday thus a Muslim holy day, festive celebrations took place in Syria to mark the Baath party's twentieth anniversary. Two days earlier, Israel's Prime

³⁴⁸ 'Syrian Air Force disposition and the 15 August 1966 incident', 24 August 1966, IDFA 30/244/70

³⁴⁹ 'Syrian Ministry of Defence Letter 6/2777', 3 September 1966, MLM Archives.

³⁵⁰ Seale, Assad, p. 120

Minister Levi Eshkol approved work on three agricultural fields northeast of Kibbutz Haon, within the southernmost demilitarized zone. The decision was taken despite the military's warnings of an imminent armed Syrian intervention to stop the work. The IDF took precaution by dispersing tanks, artillery pieces and mortars in anticipation of heavy Syrian fire. As soon as the Israeli tractors began their work, small arms fire was directed at them from Syrian positions on the Golan. An exchange of fire ensued and the Ramat David air base was placed on alert. As the hours went by the exchanges intensified with the introduction of tanks and artillery units on both sides. On 12:14 Eshkol ordered the IAF to prepare an air strike on Syrian strongholds on the Golan, and the attack began on 13:49 at an altitude of 20,000 feet and shortly afterwards SAF aircraft were spotted on radar on their way to the battle zone. To avoid confusion and possible danger to the attacking aircraft the IAF aircraft were ordered back to base and Mirage interceptors were scrambled towards the approaching SAF MiG-21 aircraft. IAF intelligence estimated that the SAF's alert during holidays stood at a pair of MiG-21s ready to scramble within five minutes and another pair ready to take off at fifteen minutes notice. Much to their surprise the SAF dispatched four aircraft and an air battle developed over Quneitra on 13:58 leading to the shoot down of two MiGs, one west of Damascus, the other southeast of the capital. The appearance of two Israeli fighters over Damascus caused almost hysteria within the Syrian political and military leadership which feared an imminent bombardment of the capital. Both crashing MiGs were clearly spotted by the Damascene populace and explanations had to be given to the worried public. On 14:22, Damascus Radio reported that an Israeli Mirage had been downed by Syrian anti aircraft units. Half an hour later four additional MiG-21s were scrambled and a second air fight ensued. One IAF Mirage failed to shoot down one of the MiGs using a

Shafrir AAM that missed its target, the other one abandoning battle due to heavy clouds. At this point both IAF and SAF aircraft returned to their respective bases unscathed.

Half an hour later, on 14:45, the Syrians began heavy artillery shelling of kibbutz Gadot within the central demilitarized zone. A large number of IAF aircraft was scrambled to bomb the Syrian positions and the battle continued for forty-five minutes. On 15:25 another wave of IAF aircraft bombed Syrian artillery until the fire stopped some fifteen minutes later. During both attacks the SAF refrained from sending aircraft to challenge the IAF. On 15:52, after the fire stopped on both sides, a pair of MiG-21s was seen over the zone and was intercepted by a couple of Mirages. One of the Mirages fired a Shafrir AAM at one of the MiGs, whose pilot erroneously activated its afterburner, thus providing the hot seeking missile with an ideal concentrated plume of heat. Despite that the Shafrir missed its target. Additional attempts by the second Mirage to fire AAMs failed due to technical problems. Finally, one of the MiGs was shot down by cannon fire while trying to avoid an incoming Shafrir AAM, and its pilot, Lt. Muhammad Sayed-Masri was killed.³⁵¹

The other MiG was damaged but returned safely to Dumeir. On 16:16 four MiG-21s were detected taking off from Dumeir and flying towards Fiq, a Syrian village in the southeastern part of the Golan Heights. The aircraft were flying at low altitude to avoid detection by Israeli radar but the pilots knew they had lost the surprise effect after the SAF controller told them to expect four IAF Mirages, which were loitering in the area. In the ensuing battle three MiG-21s were shot down by cannons (the Shafrir AAMs again missed their targets due to technical faults) and

³⁵¹ Born in 1941, Sayed-Masri belonged to the second group of SAF pilots trained on the MiG-21s in 1963-64. See: 'SAF actions on 7 April 1967', IAF No. 4 Branch report, 12 April 1967, IDFA 36-64-2012; Cooper and Nicolle, Arab MiGs, vol. 2, p. 179.

their pilots, Captains Ali Anthar Muhi ad-Din Daud, and Sec. Lt. Ahmad Quwwatly, bailed out over Jordan. Only the formation's leader managed to return safely to base. When the controller enquired whether a battle with IAF aircraft had developed and about the whereabouts of his comrades, he reported 'I do not know where the other pilots of the formation are'. Immediately as the battle began Damascus Radio announced that four Israeli aircraft were detected inside Syrian airspace and the loss of an IAF Mirage to Syrian anti-aircraft fire, the debris falling inside Israeli territory, with two more allegedly downed over Syria by SAF pilots. Amman Radio announced on 21:00 that three Syrian pilots had parachuted over Jordan, two of them having suffered slight injuries. In an interview with Beirut Radio the next morning the pilots said that they had encountered twelve Mirage fighters and that despite the Israeli superiority they managed to shoot down five aircraft. Israeli intelligence discovered later that when at home, the pilots reported 'just' two shot down Mirages. In its evening broadcasts Syrian television showed the wreckage of aircraft that were allegedly shot down. This included auxiliary fuel tanks, assumed to have been dropped by the Mirages before the battle began, as well as debris from the MiGs that crashed on Syrian territory.

On 9 April, a Syrian spokesman told United Press (UP) news agency that five Israeli Mirages had been shot down while UP's reporter in Amman confirmed that Syria had lost six of its aircraft. The SAF pilots who returned to Syria were interviewed on by the Syrian press and claimed that they had to contend with a vast number of enemy aircraft whose pilots displayed lack of courage, evaded engagement in an attempt to escape, and finally fled the battlefield despite their overwhelming superiority. One of the pilots hinted that Israel had hired mercenary pilots from Britain and other 'imperialistic states'. Only after the surviving pilots told Syrian

television of the courage of their comrade, pilot Sec. Lt. Mahmud Assama Beiruti, who allegedly managed to shoot down one of the Israeli Mirages before succumbing to his wounds and crashing did the Syrian Minister of Information Muhammad Zuabi admit that one of the SAF pilots died in combat. This was not disclosed during the day of the battle itself or during the two days that followed. According to IAF intelligence, Beiruti, who graduated from the central flying school in 1957, had been described by his instructor as 'a bad pilot, particularly weak in formation flying and navigation.'³⁵² The Lebanese daily al-Hayat was the first outside Syria to report, four days after the incident, the pilot's name, whilst reporting his funeral which had taken place in Damascus the day after his death.³⁵³

During the tense hours of 7 April, the SAF had scrambled several MiG-17 aircraft from Damascus-Mezze to provide a protective umbrella over the base in the event of an IAF aircraft attack while chasing the MiG-21s towards the capital. Overall, the SAF carried out twenty-eight MiG-21 sorties and six MiG-17 sorties, and during the afternoon, following news of pilot ejections, four Mil Mi-4 helicopters for search and rescue missions were also deployed. The battle of 7 April was the largest of its kind since 1956, both in the number of aircraft involved and casualty numbers. It was the SAF's most humiliating defeat since its inception, and although 'the spirit of the Baath' led it to react time and again to Israeli action and to display the willingness to engage the IAF in battle, the widening professional gap between both forces resulted in the destruction of six aircraft with no damage to the IAF. Israeli intelligence estimated that the SAF, while pursuing hyped rhetoric of valour and courage, was keenly aware of the consequences of this incident and its repercussions in respect to the force's future operational

³⁵² 'SAF Pilots Handbook', p. 13.

³⁵³ Al-Hayat, 11 April 1967

doctrine. Apart from the direct insult to the SAF's 'esprit de corps', the incident had far reaching implications for the relations between the SAF and the army. It became evident to army commanders that their forces were exposed to incessant IAF attacks and this led to despondency among the units and tense relations between the army and air force, though these were somewhat defused thanks to the special position enjoyed by Defence Minister and SAF C. in C. Assad within the Baath-dominated military establishment.

Most observers consider the 7 April 1967 incident the spark of the final chain of events that led to the rapid slide to war.³⁵⁴ For one thing, the air battle convinced the Syrian leadership of the imminence of a large scale Israeli offensive driving it to reinforce troop deployments along the border thus heightening the existing tension with Israel.³⁵⁵ For another, the incident exacerbated rivalries within the regime. According to the Voice of Free Syria (VFS) broadcasting from Amman, the commander of the southern front demanded that Assad, Suweidani and Col. Abdel Karim Jundi, head of Syrian army intelligence, be dismissed on grounds of incompetence. The VFS commentator went as far as to suggest that Assad refused to authorize the SAF's intervention and that only due to the pilots' initiative did the engagement take place. Jordanian press, particularly al-Dustur and al-Quds 'confirmed' that RIAF experts who examined the wreckage of the downed MiGs discovered that they had wooden AAMs, and

³⁵⁴ The literature on the June 1967 Six Day War and its origin is immense. For some of the latest, most authoritative accounts, see: Michael Oren, Six Days of War: June 1967 and the Making of the Modern Middle East (Oxford: Oxford University Press 2002); Gluska, The Israeli Military and the Origins of the 1967 War: Government, Armed Forces and Defence Policy 1963-67 (London: Routledge, 2006); Eric Hammel, Six Days in June: How Israel Won the 1967 Arab-Israeli War (New York: Scribner, 1992); Moshe Gat, Britain and the Conflict in the Middle East 1964-1967: the Coming of the Six Day War (Westport: Praeger, 2003)

³⁵⁵ Maizel, The Golan Heights Campaign, p. 138; Fred Lawson, Why Syria Goes to War (Ithaca: Cornell University Press, Ithaca, 1996), p. 21.

that this was due to the Baath regime's fear that the aircraft might turn their weapons against the government in Damascus. As absurd as these allegations may sound, they were typical of the fragile party/army/air force relations and the willingness of army officers to exploit this incident for political gains.³⁵⁶

On the external front, the air clash convinced Damascus that its defence pact with Egypt, signed in November 1966, had become a useless piece of paper that needed an immediate updating. Though Cairo had sought to underscore the seriousness of its commitment to Syria's defence by following the pact signing with the dispatch of twenty-two MiG-17 aircraft (which were in turn deployed in Dumeir airbase),³⁵⁷ the planes did little to prevent the April 1967 debacle let alone participate in the actual fighting.

Now that its deterrent posture had proven a hollow ruse an EAF delegation headed by C. in C. Muhammad Sidki Mahmoud arrived in Damascus on 10 April to discuss the incident and tighten operational cooperation between the two forces.³⁵⁸ A week later, Egyptian Prime Minister Sidki Suleiman arrived in the Syrian capital. Much to the dismay of his hosts he reiterated Nasser's cautious policy asking the Baath to avoid any abrupt moves that would trigger a general conflagration. While Cairo supported Syria's-sponsored guerrilla attacks carried out by Fatah through Jordanian territory, the prime minister said, it had no intention of escalating the tensions to a premature all-out conflict unless Israel initiated a 'total war' against Syria. As long as Egyptian forces were bogged down in the Yemen civil war, in which they had been involved

³⁵⁶ Al-Hayat, 11 April 1967; al-Dustur & al-Quds, 14 April 1967, Docket no. 4076/586/011, MLM Archives.

³⁵⁷ 'News on Syria, Lebanon and Kuwait', 10 October 1966, Docket no. 449/586.011, MLM Archives.

³⁵⁸ Al-Jarida, 12 April 1967, Docket 4077/586/011, MLM Archives.

since the early 1960s, there was little Cairo could do to help its fellow Arab states.³⁵⁹ Still, according to Jordanian sources, the Egyptians agreed to move forces closer to their border with Israel, in contravention of the Sinai Peninsula's international demilitarization in the wake of the 1956 Suez crisis.³⁶⁰

In taking this dangerous undertaking the Egyptians were taking their cue from their Soviet ally. Moscow responded to the air fight by strongly condemning (on 19 April) the Israeli 'aggression' and the following month took a major step forward by warning Damascus and Cairo of an imminent Israeli attack and claiming a large-scale concentration of Israeli forces (eleven to thirteen brigades) along the Syrian-Israeli border.³⁶¹ Though similar warnings had been issued in October 1966 and January 1967 and were widely regarded as routine Soviet response to the increasing tension along the Syrian-Israeli border,³⁶² the public humiliation inflicted on the Baath regime by the April air fight, and the growing pressure on Nasser to vindicate his longstanding pretence to champion the pan-Arab cause, especially in view of Egypt's defence pact with Syria, set in train a catastrophic chain of events that the Soviets had probably failed to anticipate.³⁶³

³⁵⁹ Al-Ahd, 9 April 1967, Docket No. 4078/586/011, MLM Archives

³⁶⁰ 'Syrian Air Force Actions on 7 April 1967', IAF no. 4 Air Intelligence Branch Report, 12 April 1967, IDFA 36-64-2012. See also Maizel, The Golan Heights Campaign, pp. 23-25; Cohen, The History, pp 163-178; Gluska, Eshkol, pp. 190-99.

³⁶¹ Yaakov Ro'i & Boris Morozov (eds.), The Soviet Union and the June 1967 Six Day War (Stanford: Stanford University Press, 2008), p. 45; Anwar Sadat, In Search of Identity: An Autobiography (New York: Harper & Row, 1978), pp. 171 - 72; al-Ahram, May 23, 1967.

³⁶² Ro'i and Morozov, The Soviet Union, p. 6; Govrin, Israel-Soviet Relations, p. 253.

³⁶³ Some Sovietologists have suggested that the warnings were intended to push Nasser to deploy troops in Sinai, thus forcing Israel to relieve the (alleged) pressure on Syria and underscoring Moscow's role as the foremost champion of the Arab cause. Such a move might have even aimed at influencing certain western policies in the wider Middle Eastern context, such as pressure on Britain to expedite its evacuation of Aden. Other Soviet experts, by contrast, have argued that while the Soviet decision to escalate the situation was still shrouded in ambiguity,

On 14 May the Egyptian armed forces were placed on the highest state of alert and two armoured divisions began moving into the Sinai Peninsula. That same day, the Egyptian chief of staff, Lt.-General Muhammad Fawzi, arrived in Damascus to get a first-hand impression of the military situation and to coordinate a joint response in the event of an Israeli attack. Though no evidence of Israeli concentrations along the Syrian border or troop movements in northern Israel was found,³⁶⁴ and despite Israel's desperate efforts to reassure the Soviets that they had not deployed militarily along their northern border,³⁶⁵ Nasser kept escalating, ordering the removal of the United Nations Emergency Force (UNEF), deployed in 1956 along the Egyptian-Israeli border as a buffer between the two states, and announcing (on 22 May) the closure of the Straits of Tiran at the southern mouth of the Gulf of Aqaba, to Israeli and Israel-bound shipping. 'Now with our concentrations in Sinai, the chances of war are fifty-fifty,' he told his ministers on May 21, during a discussion on the possible consequences of a naval blockade. 'But if we close the Strait, war will be a one hundred percent certainty.'³⁶⁶ In public Nasser was far more confident. 'The Jews have threatened war', he gloated upon the announcement of the straits' closure, 'we tell them:

Moscow probably did not want to drive the region to total war and the warnings were a classic case of miscalculation and a failed attempt at brinkmanship. Ro'i and Morozov, The Soviet Union, pp. 48-53; Isabella Ginor and Gideon Remez, Foxbats over Dimona: the Soviets' Nuclear Gamble in the Six Day War (New Haven: Yale University Press, 2007).

³⁶⁴ Muhammad Fawzi, Harb al-Thalath Sanawat, 1967 - 1970 (Cairo: Dar al-Mustaqbal al-Arabi, 1980), pp. 71-72. These reassuring findings were corroborated both by Egyptian military intelligence and by a special UN inspection. IDF History Department, 'The Six Day War on the Northern Front', June 1974, IDFA 97-922-1075, p. 59.

³⁶⁵ On three occasions the Soviet ambassador to Israel was invited by the Israeli authorities to visit the border area but declined to go. Sydney D. Bailey, Four Arab-Israeli Wars and the Peace Process (London: Macmillan, 1990), p. 190.

³⁶⁶ Sadat, In Search, p. 172. See also: Richard B. Parker, 'The June War: Some Mysteries Explored', Middle East Journal, Vol. 46, No. 2 (Spring 1992), p. 192.

You are welcome, we are ready for war.³⁶⁷ Two weeks later, the third Arab-Israeli war in two decades broke out.

³⁶⁷ New York Times, (30 May 1967)

7 The June 1967 War

The SAF on the eve of the war

Though undergoing no dramatic changes in the years preceding the war, the SAF took steps on several levels to enhance its operational capabilities in a wider confrontation with Israel. The main combat element comprising five fighter squadrons was reorganized along Soviet lines, abandoning the traditional British structure of flight-squadron-base in favour of adding the brigade as an intermediate level of command between the squadron and the air base. This was a direct outcome of the SAF's full transition to Soviet weaponry and doctrine of air warfare, and an almost certain outcome of the tight cooperation between the SAF and the EAF, which remained in place after the dissolution of the UAR in 1961. The addition of brigade in the Soviet concept of air warfare was designed to provide an intermediate command rung at the tactical/operational level aimed at increasing collaboration between frontline commanders, under whose command the brigades were placed, and operating units as as to more effectively destroy enemy forces in their operational depth. Since an air arm has the ability to both defend and offend, Soviet theoreticians perceived the air element as a full partner in the operations conducted by the ground manoeuvring forces. As a result of this change, SAF air bases simply became launching pads for the aircraft, providing squadrons with supporting services but unable to provide any dynamic contribution to the operational effort due to both their static nature and remoteness from the tactical/operational zone of fighting.³⁶⁸

³⁶⁸ Harriet Fast. Scott & William F Scott., The Armed Forces of the USSR (Boulder: Westview Press, 1984), p. 157. See also: Jacob W Kipp, 'Soviet Tactical Aviation in the Post War Period', Air and Space Power Journal, Spring 1988, pp. 8-26.

In reality, this attempt to bridge the gap between the tactical (squadron) and operational (brigade) levels had little, if any, meaning for the SAF which operated independently of the army and had no command structure that could have subordinated air operations to ground forces command. As a result, the SAF dismally failed to provide air support to the Syrian forces on the Golan Heights when war broke out on the morning of 5 June. Soviet doctrine was also applied to the SAF's higher organizational structure, which included four directorates: air warfare and air defence (including operations, manpower and administration); training; materiel; and supply and engineering.

The first directorate had under its command two air brigades - No. 3 at Damascus-Mezze, and No. 7 at Dumeir. The small IL-28 unit, designated as No. 40 flight, remained independent, as were the transport and helicopter units that were considered secondary elements.³⁶⁹ The total number of serving personnel was estimated at 4,500, including 500 officers and 450 civilians, the latter engaged mainly in administrative and maintenance duties. Of the officer complement, some 160 were pilots including seventy MiG-21 qualified pilots, fifty-five MiG-17 pilots and only five IL-28 pilots. Some thirty pilots were qualified to fly transport and helicopter aircraft.

An alert doctrine was devised throughout the period which called for a pair of MiG-21s to be scrambled at a five-minute notice, and another pair at a fifteen-minute notice during daylight, and one each MiG-21FL all-weather fighter at fifteen and thirty-to-forty-five minute notice during night. During the clashes of 1963-67 a higher alert readiness provided two MiG-21s for immediate scramble (with pilots sitting in their cockpits ready to start-up the engines and take off), two more at a five-minute notice and four aircraft at fifteen-minute notice.

³⁶⁹ 'IAF appraisal of Arab air forces', August 1967, pp. 43-44.
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At Damascus-Mezze a quartet of MiG-17s was at a thirty-minute alert for striking operations as was the case in the August 1966 attack on the stranded Israeli landing craft on the Sea of Galilee. Actual scramble of MiG-21 aircraft was carried out at much higher time spans than were dictated due to the weak air defence and early warning system. IAF C. in C. Maj. Gen. Mordechai Hod was not particularly worried about the SAF alert readiness when asked whether it would not be wise to initiate a preemptive attack on 5 June, stating that the SAF's actual ability to respond was estimated at no less than two hours before H-Hour. Thus he was confident that the Israeli aircraft returning from the initial strikes on the EAF could contain a possible SAF offensive with the mere twelve Mirages assigned to the air defence role.³⁷⁰

On the eve of the 1967 war the Syrian air defence system consisted of two control centres: one in Damascus, responsible for the defence of the capital, southern Syria and the border with Israel, and the other in Hama, responsible for defending the area north of Damascus. Both centres relied on twenty two radar stations, the majority employing older Neisse types supplied by Poland during the late 1950s and newer P-8 stations supplied by the Soviet Union, with only a few having the more advanced Soviet P-30 (see table 20). The partial coverage provided by the Neisse and P-8 radar stations meant that intruding aircraft could easily penetrate Syria's airspace at medium and high altitude as demonstrated during the 7 April 1967 air battle.

Three observation posts along the border with Israel completed the air defence system. Their role was to visually detect overflying IAF aircraft and report to the central observations post in Quneitra, which had a direct link to the operations centre at Damascus-Mezze. Since SAF scrambling reaction time was effectively unable to confront such intruders, these reports were

³⁷⁰ 'Attaining Air Superiority during the 1967 War', IDF Operations Division - History Branch, March 1972, IDFA 1198/192/1974, p. 11.

relayed to anti-aircraft units, some which were part of the SAF. The others were organic units attached to the ground forces. All anti-aircraft guns were grouped under the responsibility of No. 9 division headquartered in Muadamit al-Sheikh, which was the professional organization in the army in charge of gunnery, while tactical deployment and operation of the units was coordinated through the SAF headquarters. The ninth division had under its command three battalions totalling nine regiments. The heavy (85 and 100mm) guns were centred round the major cities and strategically important bases while the lighter guns (37 and 57mm) were positioned around SAF air bases, usually consisting of three 57mm radar-guided batteries and 14.5mm machine guns.

The bases of Damascus-Mezze and Dumeir had enhanced anti-aircraft defences being the only ones housing regular combat aircraft. For the defence of Damascus-Mezze, No. 725 regiment had three heavy gun batteries positioned west of the capital, while five 57mm gun batteries were scattered in a half circle pattern south and east of the city. At Dumeir, which was the base for the crucial No. 7 air superiority brigade, air defence was centred on five 57mm radar-guided guns.³⁷¹ SAF confidence in the ability of its air defence system to avoid IAF penetration of Syrian airspace was very low. In October 1966 three SAF officers visited the Finnish Air Force to study its air defence concept, then travelled to Britain for talks on possible acquisition of an air defence trainer and control and command equipment for the SAF operations room in Damascus-Mezze. A cable sent from the Ministry of Defence in London to the air attaché in Damascus stated that the 'Syrians worried about their air defences'.³⁷² An IAF

³⁷¹ *Ibid*, pp 48-49. See also: 'Principles of Air Defence', Doc 355/2458 issued by the Syrian Army, 6 September 1965, MLM archives.

³⁷² MoD to AA in Damascus, 1 December 1966, TNA, FO371/186929

intelligence estimate in 1966 echoed the feeling in Damascus by stating that 'SAF air defences are exposed and breached, disposition and performance of the radar stations do not compensate for the many wide holes in radar coverage enabling penetration of Syrian airspace from all directions.'³⁷³

The SAF leadership was fully aware of the problematic lack of Surface to Air Missiles (SAM) batteries - considered far superior to anti-aircraft guns in the defence of major cities and military installations. Syrian leader Salah Jadid travelled to Moscow in January 1967 to negotiate the supply of at least five SAM SA-2 batteries but the Soviets were apparently reluctant to release these 'strategic' assets to Syria at the time on the pretext that 'it was not interested in contributing to a new state of disquiet in the Middle East' (though the IAF had begun deploying US made Hawk SAMs in 1965 and the Egyptian Army was already in possession of Soviet supplied SA-2 batteries prior to the war). In the aftermath of the 1967 war the SAF's air defence system would develop rapidly and include several SA-2 batteries.³⁷⁴ Despite its limited size and lack of adequate numbers of strike aircraft, the SAF's operational doctrine left out training aircraft such as the L-29 which could have been armed and used for close support missions.³⁷⁵

Having realized the fragility of its combat aircraft dispersal at only two permanent bases, the SAF invested heavily in preparing two secondary bases, Seiqal and Marj Ruheil for jet fighter operations. During the various skirmishes with the IAF in the second half of the decade,

³⁷³ 'Intelligence situation report', 6 September 1966, IDFA 36-64-2012

³⁷⁴ 'Talks of the Syrian mission in Moscow', al-Sayad, 2 February 1967; al-Jadid (Beirut), 10 February 1967, quoted in Hatzav report, Doc. No. 4042/586-011, MLM Archives (22 February 1967).

³⁷⁵ Author interview with Maj. Haim Markan, 7 July 2012. The IAF armed forty seven of its sixty or so Fouga Magister trainers prior to the 1967 war and used them effectively to strike at armour columns and artillery pieces, albeit for a human price as the aircraft were not equipped with ejection seats.

these airfields were used to disperse MiG-17 and 21 aircraft from their permanent bases in fear of destruction by an IAF 'Blitz' attack.

Other facilities were readied for possible use during war, including T-4 (West) and Neirab, home to the central flying school, which had its runway lengthened to nearly 2900 meters; so were Rassem el-Abbud and Deir ez-Zor, the latter close to the Syrian-Iraqi border, the farthest airfield from the border with Israel. For the first time in the history of modern Syrian aviation work on a new airfield was initiated in June 1965 - the new Damascus International Airport. Asphaltting of the two parallel runways started in early 1967, and same for the new aprons was envisaged for June.³⁷⁶ Israeli historian Michael Oren cites official Syrian sources claiming that on the eve of war a mere 45 per cent of SAF pilots were considered 'good', 32 per cent 'average' and the remainder 'below average'. Aircraft serviceability within the MiG-21 units at Seiqal and Dumeir was estimated at 34 out of 42 (81 per cent). Both estimates are considered reasonable by comparable international standards, though Oren implied otherwise.³⁷⁷

The central flying school in Neirab was producing an average annual output of thirty new pilots, albeit only those graduating from late 1966 onwards were trained on the newly acquired Czech L-29 jet-trainer, and the local cadre of some sixteen Syrian instructors still had to rely on the backing of five Soviet and three Czech flight-instructors permanently attached to the school. Aircraft and equipment serviceability rates were kept at an acceptable level through the employment of some fifty Soviet, fifteen Czech and ten Polish ground instructors, the latter

³⁷⁶ Al-Thawra (Damascus), 27 December 1966, quoted in Hatzav daily report, 31 January 1967, Docket 1027/586-011, MLM Archives; al-Baath, 20 December 1966, MLM archives, quoted in Hatzav daily report, 12 February 1967, Docket 1037/586-140.

³⁷⁷ Oren, Six Days of War, p.163.

specializing in maintaining the Neisse radars which on the eve of the 1967 war were ten years old, still problematic for the few indigenous Syrian technicians.³⁷⁸ IAF intelligence data supports the assumption that aircraft serviceability was on acceptable levels. On average, during the months of October-December 1966 the MiG-17 units, for example, reached a daily utilization of more than 80 per cent (on certain days performing up to 48 sorties a day with an average of 35 aircraft), while the MiG-21 units reached lower figures, estimated at 50 per cent (daily peaks reaching 25-29 sorties a day with an average of 40 aircraft).³⁷⁹ These figures reflect the still low number of serviceable aircraft available, the result of poor SAF technical abilities, a long problematic shortcoming rectified only partially by the gradual increase in Soviet technical assistance. This was particularly evident with the maintenance of the MiG-21 aircraft, the majority of which were newly built, less than three years in service, thus requiring less maintenance than the older MiG-17 some of which were eight or nine years in service. Within six months, the serviceability rate of the MiG-21 units was to reach almost 80 per cent.³⁸⁰ Still, the Israeli estimate was that on the first day of a full-scale war the SAF could produce four sorties per aircraft for air defence, three for ground attack and close support and two-and-a-half sorties for bombing missions beyond the tactical and operational combat zones. The latter estimate was based on erroneous IAF intelligence, which considered the few IL-28 aircraft available as of the bomber rather than the photo-reconnaissance model. Therefore, the IAF was unaware that the SAF practically had no dedicated bomber force at its disposal. As for the total tonnage of ammunition that could potentially be dropped on targets along the various battle

³⁷⁸ 'IAF intelligence estimate of Arab air power', August 1967, pp 44, 51.

³⁷⁹ 'Summary of Arab air forces performance during the months of October-December 1966', 1 February 1967, IDFA 23-64-2012.

³⁸⁰ 'IAF intelligence estimate of Arab air power', p 52.

zones during wartime, the estimate stood at twenty-eight tonnes, which was insignificantly above that of the RSAF (25) or the RJAF (18), but much lower than that for the EAF (228) or IrAF (107).³⁸¹

The ability to carry ammunition to enemy targets is not only related to the number of serviceable combat aircraft available but also to the quick turnaround time achieved between sorties and the ability to haul and store ammunition close to air bases from which combat missions are likely to be launched. These factors are closely associated with the quality, incentive and enthusiasm of ground crews. The IAF's plan of preemptive strike on Arab air forces' bases on the morning of 5 June, or Operation Moked (Focus) as it was known, called for halving the time required to reload ammunition on aircraft from the customary thirteen to fifteen minutes.³⁸² This was a tough target to attain even for the well-trained and high-spirited IAF, let alone for the SAF in the situation it found itself at the time. To compensate for the relatively small number of combat aircraft, shortly before the signing of the Syrian-Egyptian defence pact in October 1966 twenty-two EAF MiG-17 aircraft arrived in Dumeir with their pilots, instructors and technical crews.³⁸³

On 10 April 1967, as a direct result of the dogfight three days earlier, the SAF began to disperse its aircraft to secondary bases. No. 70 squadron, operating fifteen MiG-21FLs, dispersed to Seiqal (considered until then an emergency airfield). A flight of five MiG-21F13s from Dumeir was flown to T4 (Tadmur/Tiyas), and one of the three MiG-17 units based in Damascus-Mezze was dispatched to Blei. Another MiG-17 squadron was divided into two flights, one based

³⁸¹ Ibid, pp. 53, 147.

³⁸² Danny Shalom, Like a Bolt out of the Blue - Moked Operation in the June 1967 Six Day War, (Rishon Lezion: Baavir Aviation Publications, 2002; Hebrew), p. 58.

³⁸³ Al-Safah (Beirut), 6 October 1966

in T4 and the other in Hama (though the latter returned to Damascus-Mezze shortly before the start of the war). In May the SAF entered a state of readiness with pilots abroad being recalled to their units. Having refrained from integrating reserve pilots in operational activities during peace time, the SAF hastily converted several reserve MiG-17 pilots in Damascus-Mezze.³⁸⁴ These precautionary steps were not linked to any known offensive IAF plan but were rather a reaction to the 7 April air battle, which greatly heightened SAF commanders' anxiety over a future confrontation with Israel.

Indeed, immediately after the incident Assad asked the Baath party leadership to reconsider the return to service of several veteran pilots purged and dismissed from service after the 1966 coup due to their questioned political disloyalty. In reply to opposition to such a move on the grounds that these disloyal pilots posed a threat to the party, Assad claimed that he would rather have politically disloyal pilots who could stand up to the IAF and contribute to the SAF's success than loyal but inexperienced pilots. Former SAF C. in C. Assassa, dismissed during the UAR era, appeared before the party plenum and begged to return to service stressing that he had put aside past disagreements and was ready to join his comrades in arms for the purpose of defending the nation. He was thanked by the party chairman and assured that he would be recalled to service in case of need - as indeed happened.³⁸⁵

Nevertheless, the party plenum unanimously rejected Assad's request. In an interview with the Egyptian newspaper al-Mussawar three weeks after the 7 April incident, Syrian Chief-of-Staff Suweidani justified this decision on the grounds that 'every pilot-officer who had left the

³⁸⁴ 'Intelligence cable no. 199/27', 27 May 1967, 10:30am, IDFA 37-64-2012.

³⁸⁵ Assassa was recalled back to active service on the eve of the 1967 war and appointed commander the Third Air Brigade comprising the SAF's first line MiG-21s. Cooper and Nicolle, Arab MiGs, vol. 3, p. 175

service in the past can no longer be useful to us because of the dramatic development in military aviation and the addition of modern warplanes.³⁸⁶ Needless to say this statement had no professional basis whatsoever since reserve pilots could always convert to newer aircraft and be trained in the newest tactics. However, fearing political disloyalty from old guard pilots the Baath preferred to abolish reserve service for pilots, depriving the force of its most valuable pool of experienced airmen.

The SAF High Command

Heading the SAF on the eve of the war was a group of experienced officers under the command of Assad and his 'number two', Brig. Gen. Muhammad Assad Moukiad. Born in 1926, Moukiad was a veteran of the 1948 war. He was arrested during the 1950 coup but released soon after and sent to Britain and France to study aeronautical engineering. Moukiad was involved in the Spitfire purchase (in 1954) and upon his return from Britain was appointed to head a section of the fourth division (supply) in the SAF HQ. Following a brief spell in Egypt in 1955 he returned to the central flying school at Neirab, from where he was dispatched a year later to Britain to conclude the Meteor NF-13 deal, then went to Cairo to study logistics. Upon his return he was reappointed chief of the 4th division (logistics & supply) at the SAF HQ. Moukiad was deeply involved in the procurement of MiG-17 (1958) and MiG-21 (1963) aircraft and frequently travelled to the Soviet Union to address training, maintenance and delivery issues. Though loyal to Assad, Moukiad, being an engineer rather than a pilot, could hardly deal with operational

³⁸⁶ Al-Hayat (Beirut), 4 May 1967, quoted in daily news report no. 1102/586/011, MLM Archives; al-Mussawar (Cairo), 28 April 1967, quoted in daily news report no. 4092/586/011, 11 May 1967, MLM Archives

matters. His nomination as ‘number two’ was typical of the politically-inspired appointments in the SAF during the post-Baath era.

Air Brigade No. 3 was commanded by Assassa who, in stark contrast to Moukiad, was considered one of the best pilots in the SAF. Having studied flying in Italy in 1950 he became a Fiat pilot. When the Meteors arrived he was sent to Britain to train on them and was one of the first fully qualified jet pilots in the force. In 1956 he went to Moscow and trained as a MiG-17 pilot, returning to command the No. 1 squadron, the SAF’s elite unit. Assassa had a highly developed political consciousness, opposed the UAR and was aware of its damaging effect on the SAF. As noted earlier, he was involved in the 1961 coup that brought the union’s dissolution but and the subsequent 1962 putsch. Having played a key role in trying to suppress the 8 March 1963 coup that brought the Baath to power, and given his resentment of Syria’s growing dependence on the Soviet Union, he was relieved as SAF chief of staff and appointed Inspector-General, an appointment with no executive authority.³⁸⁷ Following a few years ‘on ice’, and due to his friendship with Assad, he was returned to active duty on the eve of the June 1967 war.

Assassa had under his control three squadron leaders: Lt. Col. Abdul Razzak, Lt. Col. Naseh Khalid Olwani, and Lt. Col. Khalid Marwan Zain ad-Din. Air Brigade No. 7 was headed by Lt. Col. Fayez Mansur, a Meteor and MiG-17/21 pilot. Commanding the brigade’s No. 725 anti-aircraft regiment was Col. Dukaq Immad.

³⁸⁷ ‘Annual report on the Syrian Air Force for the year 1962’, 21 January 1963, TNA FO371-170625. See also Beeri, p 143, 146 & 150.

The War

5 June - Day One

Anticipating nothing of the unusual, the SAF's day began uneventfully with the normal routine of training flights taking off from Dumeir to the nearby firing ranges and offices readied for yet another day of work. This clearly illustrates how the SAF was unaware of what was going on in the first critical hours of war when the IAF destroyed most of the Egyptian air force on the ground.³⁸⁸

Even when the SAF operations centre in Damascus began to receive the initial news of intense IAF air activity, with dozens of take offs from the various air bases being recorded, all heading southward, the red warning lights failed to alert anyone to the impending situation. The information was derived from the tactical Italian-supplied Marconi radar station positioned on top of Mount Ajloun in Jordan. It was the only radar capable of detecting aircraft flying within Israeli airspace from its borders with Syria to the northern shores of the Dead Sea.³⁸⁹ While the coordination between the RJAF operations centre and that of the SAF was functioning well, and the information was received on time in Damascus, none of the SAF senior officers asked themselves how was it that the stream of aircraft went from north to south while the Egyptians misinformed their allies that they were on the attack (in which case the Syrians should have noted that the 'attacking' aircraft were going the other way round - from south to north).

³⁸⁸ Oren, *Six Days of War*, p.177; Mutawi, *Jordan in the 1967 War*, p. 123.

³⁸⁹ 'The SAF during the Six Day War', IAF Air Intel Branch 4 doc md-6-(2)-13, 1979, p. 137. See also Shalom, *Like a Bolt*, p.473.

On 09:00, Field Marshal Abdel Hakim Amer, Egyptian chief of staff and Minister of Defence, told the Syrians that 75 per cent of the Israeli air force had been destroyed and that the EAF was carrying out attacks on IAF air bases. The message was also received the office of UAC Supreme Commander General Riad, who issued immediate orders to the RJAF and SAF to increase their combat readiness in anticipation of joining the alleged EAF attacks.³⁹⁰ At that time the SAF began to conduct patrolling missions along the Damascus-Sheikh Maskin axis.³⁹¹ Close to noon, the RJAF scrambled its Hawker Hunter squadron from Mafraq air base for a series of attacks on Israeli cities and villages, including Kfar Sirkin, close to the town of Petah Tikva, which was erroneously identified as Lod (Lydda) International Airport due to similar runways pattern. On 11:50, following lengthy hesitations at SAF headquarters, the orders for carrying out Operation Rashid, the bombing of northern Israel and the air bases in that area, were finally issued and twelve MiG-17 aircraft were scrambled from Damascus-Mezze to attack the Megiddo airfield and the vicinity of the Haifa bay arriving over their targets at between 12:15-12:30.³⁹² Megiddo was most probably attacked by mistake as the MiG pilots erroneously mistook it for Ramat David air base (both airfields looked similar from above at the time). One of the MiGs was downed by an anti-aircraft gun battery; the others fled back to Syrian airspace.

A MiG-17 was forced to land on the beach of Rashidiya in southern Lebanon after having dropped its bombs on Haifa bay. Loitering too long over the area, the pilot realized he ran out of fuel, made a successful forced landing slightly bruising his forehead, and was returned that day

³⁹⁰ Mutawi, *Jordan in the 1967 War*, p. 126.

³⁹¹ 'The 1967 war on the northern front', IDFA 97-922-1975, p. 171; 'Attaining Air Superiority', IDFA 1198/192/1974, p. 43.

³⁹² *Ibid*, p. 45.

to Damascus.³⁹³ One of the other MiGs, purportedly a model 21FL, flown by Capt. Adnan Hussein, was shot down by an IAF Mirage near Fort Tawfiq on 13:40 while on its way back to Syria. Ironically, debris from the MiG struck the Mirage whose pilot was forced to eject over Israel prompting Syrian sources to argue that Hussein's loss was not in vain. Another MiG, flown by Mardan Zein Abedin, failed to reach its base having been hit by flak while bombing Tiberias. The pilot suffered leg injury and bled heavily, resulting in his loss of consciousness and crashing within Syrian territory.³⁹⁴

On 13:10 a pair of MiG-17s dropped bombs on a number of Israeli targets including kibbutz Deganya, which the Syrian army had failed to conquer in the 1948 war, the Israeli Arab village of Eilaboun, Eshed Kinarot (near the Sea of Galilee), an IDF camp in the Galilee, and the convalescence home in kibbutz Kfar Hahoreh (near Nazareth), causing one coastal police soldier's death and insignificant damage to infrastructure. Both aircraft were shot down. The convalescence home was bombed because of its vicinity to the IDF's Northern Command HQ as a result of misidentification. A total of seven SAF sorties were recorded during the first day of fighting. One of the IAF commanders later commented on the haphazard manner of SAF operations that 'they sent a duo here and a trio there in a disorganized fashion, somewhat hysterically and with no real preparations'.³⁹⁵ Despite this sporadic and erratic operation, Damascus Radio proudly boasted that 'The Syrian Air Force has begun to bomb Israeli cities and

³⁹³ Sawt al-Aruba (Beirut), 6 June 1967.

³⁹⁴ Al-Anwar (Beirut), 15 June 1967.

³⁹⁵ Pollack, 'Air Power in the Six-Day War', Journal of Strategic Studies, vol. 28, No. 3 (June 2005), p. 462.

to destroy its positions'.³⁹⁶ Certainly the most bizarre incident of the day was a MiG-17 that actually overflew a Ramat David runway at low altitude without dropping any of its bombs or attempting to strafe parked aircraft or facilities. Instead it continued eastwards to the adjacent disused Megiddo airfield only to be shot down by a 20mm anti-aircraft gun.³⁹⁷

The disorganized nature of SAF operations did also severely affect the situation in Jordan. As part of the UAC coordination agreed before the war the SAF was supposed to assist the Jordanian military effort by sending aircraft to enhance the RJAF's single combat squadron - but none of the aircraft were deployed. Maj. Gen. Yusuf Kawash, a member of the Jordanian delegation to the UAC between 1964-67 and chief of operations for the Central (Jordanian) Front during the war, claimed that the lack of coordination between UAC members degraded their level of operations and seriously jeopardized the effectiveness of those sporadic air attacks carried out by the SAF, IrAF and RJAF during the first day of war. Kawash indicated that this outcome was not necessarily due to military incompetence but possibly a result of political considerations.³⁹⁸ According to the author of a Lebanese study of the 1967 war, had the SAF (in coordination with the IrAF and RJAF) taken advantage of the fact that the IAF was fully engaged on the Egyptian front in the early morning hours of 5 June, and had it provided air coverage to Jordanian forces trying to confront IDF troops advancing towards Jenin, the towns of Tulkarm and Qalqilya, Jenin might have been saved.³⁹⁹ Asked to intervene on 09:00, the SAF

³⁹⁶ Shmuel Segev, Alone in Damascus (Jerusalem: Keter Books, 2012; Hebrew), pp. 226-27; Oren, Six Days of War, p. 186.

³⁹⁷ Wg. Cdr. Goring-Morris (British Air Attaché Tel-Aviv) to London, 'Activities of Israel Air Force during Arab-Israeli war, 5-10 June 1967', 13 July 1967, TNA, FCO 17/576, p. 10.

³⁹⁸ Mutawi, Jordan in the 1967 War, p. 159.

³⁹⁹ Ibid, p. 154.

command post in Damascus replied that the SAF aircraft 'were not ready to strike and their fighter pilots were engaged in training'.⁴⁰⁰

Deviating from its original planning, the IAF decided to shift some combat formations from attacks on air bases in Sinai and Egypt to the Syrian front to counter the possibility of forthcoming attacks. On 12:46 three Super Mystere aircraft took off from Hatzor air base towards Marj Ruheil, followed three minutes later by four Mystere aircraft destined to bomb Damascus-Mezze and four additional Super Mysteres to bomb Seiqal. The decision to attack Marj Ruheil first was surprising as this had been an emergency airfield housing aircraft that were only partially operational. Seiqal served as a remote dispersal airfield for some twelve MiG-21 diverted from their permanent base in Dumeir. The SAF estimated that Damascus-Mezze and Dumeir could be primary targets as both housed nearly two fifths of the SAF's combat aircraft, and as a result on the morning of 5 June changes were made and aircraft dispersed outside their permanent bases. On 12:52, four Ouragans took off from their base at Lod Airport to bomb Marj Ruheil for the second time, but only a few unscathed aircraft were noticed on the ground, leading the formation to engage mainly in strafing hangars and buildings, including the control tower. The final attack on Marj Ruheil took place on 13:30 by four Mysteres from Ramat David, destroying a pair of MiG-17Fs and a single Mi-4 that was the base search and rescue helicopter. By 14:00, the airfield's single runway, most infrastructure and parked aircraft had been neutralised, rendering the air base non-operational.⁴⁰¹

⁴⁰⁰ *Ibid.*, p127.

⁴⁰¹ Maj. Yossef Abudi, 'Operation Moked in June 1967', unpublished document, IAFA Archives (1971)

On 12:55 four Vautour bombers took off from Ramat David to destroy aircraft at Dumeir. Unlike the previous attacks, the SAF was alerted on time and managed to scramble three MiG-21s though the Vautours were already overhead the base. One of the MiGs released an Atoll AAM, and maybe a second, which hit one of the Vautours, with the pilot ejecting and captured by the Syrians. According to Syrian sources, the victorious pilot was Adib Gar, a MiG-21FL pilot from the Dumeir-based No. 70 squadron.⁴⁰²

Seiqal air base was attacked on 13:04 by a quartet of Super Mysteres, one of which shot down a SAF MiG-21. On 13:31, Dumeir was attacked again by four Vautours which were met by heavy anti aircraft fire from 57 and 80mm guns positioned around the airfield. Six minutes later they were joined by three Super Mysteres strafing the runway, taxiway, aircraft shelters and various facilities. The task of neutralizing Dumeir was definitely not complete by 14:15 though the three attacking Mysteres had left eight MiG-17s and MiG 21s wrecked on the ground. Dumeir was bombed again between 14:55 and 17:55 by three Mysteres, seven Super Mysteres and four Mirages. Seiqal and Damascus-Mezze were now the only airfields believed to remain operational. On 14:00 Seiqal was attacked by four Super Mysteres. Seiqal had encountered a relatively heavy defensive posture of both ground based anti-aircraft fire and airborne MiG-21 aircraft. In the ensuing battle one Super Mystere was slightly damaged but managed to shoot down the engaging MiG. Another MiG-21 and three MiG-17 aircraft were destroyed on the ground.⁴⁰³

⁴⁰² Cooper and Nicolle, *Arab MiG's*, vol. 3, p. 180; Dupuy, *Elusive Victory* (Dubuque: Kendall/Hunt Publishing, 1992), p. 20. Both studies erroneously identify his unit as No. 5 squadron.

⁴⁰³ 'Attaining Air Superiority', p. 62.

By 15:00 Damascus-Mezze was no longer operational with two formations of four Mysteres and four Ouragans having claimed the destruction of three MiG-17s and two IL-28s photo-reconnaissance aircraft. One of the Mysteres was hit by anti-aircraft fire and crashed over the Golan Heights killing the pilot. Despite this, the IAF dispatched two Mirages on 15:15 for a strafing mission, but both aircraft encountered heavy anti-aircraft fire and were shot down. It is possible that one of them was struck by an Atoll AAM fired by a SAF MiG-21 loitering over the base. On 15:45 three Mirages took off from Tel-Nof to attack T4 air base where SAF MiG-21s were believed to be still operational. The strafing of T4 resulted in nine aircraft destroyed on the ground. In retaliation, on approximately 16:00 a number of MiGs dropped bombs over the Galilean kibbutz of Misgav Am, causing insignificant damage. On 16:40 three Mysteres returned to strafe Damascus-Mezze and destroyed two IL-28s and one IL-14 aircraft amidst heavy flak. Both IL-28s were already heavily damaged in a previous attack.

Thus on first day of the war, the IAF lost three aircraft over Syria and claimed seven MiG-21s and three MiG-17s in air combat.⁴⁰⁴ By the end of the day five SAF bases had been bombed by eighty-two IAF sorties, causing the loss of fifty-three aircraft, about 44 per cent of the SAF's total combat force. Only Dumeir airbase ceased to function. The other four suffered considerable damage but were made operational towards night.⁴⁰⁵

6 June - Day Two

Overwhelmed by the IAF attacks on its air bases the previous day, the SAF refrained from launching a large scale offensive during the second day of war though it could still muster

⁴⁰⁴ *Ibid.*, pp. 63, 66

⁴⁰⁵ 'Attaining Air Superiority', pp. 45, p. 48, 51.

sufficient operational MiG-17s and 21s aircraft and most of its combat pilots were still unscathed. The SAF did not attempt to follow in the footsteps of its EAF mentor that succeeded in carrying out sporadic sorties with whatever operational it had just a day after the majority of its aircraft were destroyed. These EAF sorties peaked to a height of some forty on 8 June.⁴⁰⁶ Following IAF attacks that started on 04:45 on various targets on the Golan Heights, Syrian artillery began a barrage of fire which became intense during the next couple of hours. Luckily for the Syrians, the IAF could not muster enough aircraft to silence the artillery. However, this disadvantage was not met by any SAF initiative save a single sortie involving a couple of MiG-17s which dropped a few bombs on a wooded area near Tiberias, causing no damage apart from some burning trees and leaving no impact of any military significance. This lack of SAF activity was in stark contrast to the intense activity by Syrian artillery that continued shelling Israeli villages in the Galilee panhandle. During the evening long range guns fired at Tiberias and some thousand shells rained on Rosh Pina, compensating for the SAF's inability to paralyze the adjacent emergency airfield in Mahanaim. An armoured attack on the Shaar-Yishuv and Dan kibbutzim was contained by IAF aircraft at a high cost to the invading forces, with some two hundred Syrian soldiers killed and seven T-54 tanks destroyed. This failure convinced the Syrian high command of the futility of attempting a ground offensive without proper air cover, but the SAF was clearly unable to fulfil its part in such operations. Overall, the IAF carried out a hundred combat sorties on the Syrian front, slightly less than 17 per cent of all sorties during the second day of fighting.⁴⁰⁷

⁴⁰⁶ Nordeen and Nicolle, *Phoenix over the Nile*, pp. 212-15.

⁴⁰⁷ 'The 1967 war on the Syrian Front', p. 206.

7 June – Day Three

On the night of 6-7 June the UN Security Council adopted a resolution calling for all parties involved in the war to agree to a ceasefire. Realizing that the situation was tilting against its Arab allies, Moscow pressed for an immediate and unconditional suspension of hostilities, retreating from a previous demand that Israel withdraw to the 4 June lines. The resolution signalled to the IDF high command that time was running out, though a decision to conquer the Golan Heights, from which the Syrians had been bombarding Israeli villages for years, was still pending with minister of Defence Dayan reluctant to undertake this move despite intense pressure from the local villagers. The IAF began bombing Syrian positions on 06:30 and two hours later strafed tankers that hauled petrol to front units along the Damascus-Quneitra road damaging three anti-aircraft batteries and causing panic in Damascus. Frantic army calls for SAF intervention remained unanswered as low visibility and heavy clouds prevented air operations over the area. Similarly SAF request that the (greatly depleted) EAF intervene and assist in defending the Golan Heights was turned down.⁴⁰⁸ The deteriorating weather delayed the IDF's decision to move on the Golan Heights as IAF close support was questionable.⁴⁰⁹ On 15:10, with most clouds dispersing, a single SAF MiG-17 dropped two bombs over Tiberias, one falling into the city cemetery, the other on a garage, causing insignificant damage.⁴¹⁰ A SAF MiG-21 was lost in air combat over Syrian territory during the day.⁴¹¹

⁴⁰⁸ *Ibid.*, p 389.

⁴⁰⁹ *Ibid.*, pp. 208, 210.

⁴¹⁰ *Ibid.*, p 213.

⁴¹¹ 'Attaining Air Superiority', pp. 45, 64.

8 June – Day Four

During the night of 7-8 June Syrian army high command decided to change its disposition from an offensive to a defensive posture. The No. 44 brigade, one of its two armour formations, began to retreat with the aim of concentrating around Damascus to defend the regime.⁴¹² Despite massive IAF attacks that day the only recorded SAF activity were five MiG-21s patrolling sorties from T4, the first air base to be repaired and returned to operational use.⁴¹³

9 June – Day Five

Having crippled the Egyptian army and almost completely destroying the EAF, the IDF diverted its main effort northwards with the aim of conquering the Golan Heights and ceasing the constant Syrian artillery barrage on the northern villages. Almost the entire Syrian army, comprising thirteen brigades, had been concentrated along the border in this area since 5 June. Its core force comprised four mechanized and armoured brigades (Nos. 17, 25, 44 and 80), the first two deployed southeast of Quneitra respectively and a third opposite the Israeli kibbutz of Almagor, plus six infantry brigades (Nos. 8, 11, 19, 32, 90 and 123).

The crack No. 70 armoured brigade was dispersed around Damascus and the No. 5 infantry brigade around Homs. Damascus Radio announced on 03:20 that Syria had agreed to a ceasefire and IAF pilots reported that many army units and soldiers were seen retreating on their way east.⁴¹⁴ IAF operations started on 09:40, followed two hours later by the advancing ground forces. The IAF's massive bombardment of Syrian positions produced two hundred sorties in

⁴¹² *Ibid*, p. 226.

⁴¹³ 'SAF development', Doc. MD-6-2-13, IAF Intel, (1979), p. 01-03-02.

⁴¹⁴ *Ibid*, p. 238.

which 400 bombs were dropped.⁴¹⁵ SAF activity on that day was confined to four MiG-21 patrolling sorties from T4, during which one aircraft was shot down in air combat.⁴¹⁶ The SAF did not even attempt to scramble its remaining planes to confront the dozens of attacking IAF aircraft instead relying on its anti-aircraft guns which had managed to shoot down two IAF aircraft, killing their pilots.

10 June – Day Six

On 08:30 Damascus Radio announced that the Golan key city of Quneitra had been captured by Israel. The announcement was premature (the city was taken during the late afternoon) and was aimed at influencing the UN Security Council to pressure Israel to accept a ceasefire. IAF air operations over the Golan ceased on 14:00 to the relief of SAF command which believed an IDF march on Damascus to be imminent and placed MiG-21 aircraft on high alert to defend the capital in such an eventuality.⁴¹⁷

The Syrian Foreign Minister Ibrahim Machus convened his staff in Damascus, and later admitted through a cable sent to all Syrian embassies abroad that Syria had been defeated ‘in battle but not in war’, citing the lack of air cover as the main reason for the army’s inability to carry out its offensive plans. In the afternoon hours of 11 June, Mount Hermon was conquered thus formally ending the war on the Golan Heights.⁴¹⁸

⁴¹⁵ Hanoach Bartov, Daddo: Forty-Eight Years and Twenty More Days (Tel Aviv: Maariv, 1979; Hebrew), vol. 2, pp. 139, 141.

⁴¹⁶ ‘SAF Development’, Doc. MD-6-2-13, IAF intel (1979), p. 01-03-02; ‘Attaining Air Superiority’, p. 64.

⁴¹⁷ ‘The 1967 War’, pp. 341, 364.

⁴¹⁸ Ibid. p. 367.

The Aftermath

Apart from its inability to deter the IAF from carrying out sixty seven devastating attacks on its air bases the SAF was totally absent from the ground war, which had developed during the last two days of the war, namely the battle over the Golan Heights. The IAF carried out 1,077 combat sorties on the heights, destroying seventy four tanks, thirty nine APCs, sixty seven guns and three hundred twenty vehicles, and paralyzing eighty seven camps and artillery positions.⁴¹⁹

The SAF losses in pilots, according to official Syrian sources, amounted to a mere seven (5.4 per cent of the total number of combat pilots).⁴²⁰ This enabled the SAF to quickly reorganize, absorb deliveries of replacement aircraft and train a new generation of pilots. In 1968 sixty two new pilots graduated from the central flying school and posted to the MiG-21 and Su-7 units, the latter already arriving in Syria as early as 20 June 1967.⁴²¹ The main lesson learnt during June 1967 was that aircraft could no longer be parked in the open. By July 1967 extensive Hardened Air Shelters (HAS) construction work had been noted at Blei, and in September construction began of two new bases - Khulkhule and Nasseria. The SAF's operational readiness was restored as early as November 1967 with most squadrons returning to their pre-war strength.

As far as material losses were concerned, following the destruction of more than a third of the SAF's assets an immediate massive rebuilding effort ensued with financial and procurement backing from Moscow and leading Warsaw Pact member states, particularly Czechoslovakia, Poland and East Germany. Damascus now benefited from its April 1966

⁴¹⁹ Abudi, 'The IAF in the 1967 War'.

⁴²⁰ Cooper and Nicolle, *Arab MiG's*, vol. 3; Dupuy, *Elusive Victory*, p. 197.

⁴²¹ 'IAF review of the SAF', Doc. MD-6-(2)-13 (1979).

agreement with Moscow for the supply of dozens of MiG-17s and MiG-21s aircraft, as well as Su-7 close support aircraft. The reliable Lebanese daily al-Nahar had reported in October 1966 that the deal included 72 aircraft, but this number was increased to compensate for the losses incurred during the war and it is estimated that more than a hundred combat aircraft were eventually supplied, mostly of the types already in service but of advanced models (the MiG-17F and MiG-21FL). These were augmented by two Sukhoi Su-7BMK squadrons, in line with the deal concluded before the war.⁴²²

By November the SAF had more than regained its combat aircraft strength possessing 115 aircraft compared to 97 on the eve of war.⁴²³ Following the destruction of two-thirds of its modest IL-28 force, the SAF decided to phase out the last operational aircraft by early 1968. They were replaced in the photo-reconnaissance role with camera-equipped MiG-21R aircraft. The intensive training of pilots on the newly arrived equipment took its toll on the SAF, which lost nine aircraft (one MiG-21FL, two MiG-21Us, two MiG-17s, one MiG-15UTI and three L-29 Delfins) and at least seven pilots in a flurry of accidents that occurred between the end of the war and mid-November 1967 - about the same number of pilots as those lost in the war. Six out of nine aircraft were pure trainers (67 per cent) and only three operational aircraft. Five were lost due to technical reasons and four in mid-air collisions.⁴²⁴

In September 1967 the Soviet Foreign Minister, Vladimir Semyonov, arrived in Damascus to discuss yet another arms deal, this time to include VK-750 (NATO code SA-2)

⁴²² Al-Nahar (Beirut), 7 October 1966

⁴²³ 'Reorganization of the SAF', 12 November 1967, IDFA 37-64-2012

⁴²⁴ 'Summary of aircraft losses in Egypt and Syria', 27 November 1967, IDFA 37-64-2012

surface-to-air missiles.⁴²⁵ Assad's grip on the military was tightened when, immediately after the defeat, he elevated himself to the rank of Field Marshal and took over the headship of the Baath's military committee. His closest confidants were Maj.Gen. Muhammad Huli, head of the SAF intelligence, who chaired the presidential commission on security, and, Maj. Gen. Naji Jamil, a Muslim Sunni who became deputy defence minister and SAF commander.⁴²⁶ Probably the only branch of the army to attain credit was the anti-aircraft command, which provided a formidable line of defence over SAF air bases. Ten out of seventeen downed IAF aircraft, nearly 60 per cent of IAF losses over Syria, were positively attributed to flak units that were properly armed and trained. However, it became evident after the war that anti-aircraft guns were a weapon of the past and that the SAF would have to base its future air defences on surface-to-air missiles.

Though the initial SA-2 batteries were stationary, they had better accuracy and were far more lethal than guns. By the end of 1967 the SAF's combat force had been organized into two brigades, renumbered 13 and 16. The thirteenth brigade consisted of four squadrons, No. 10 with MiG-17s, No. 54 with MiG-21s (based at T4) and Nos. 67 & 77 with MiG-21s, one in Dumeir, the other in Seiqal. The No. 16 brigade was headquartered in Hama and comprised three squadrons: No. 53 operating Su-7 aircraft and Nos. 1 and 9, both operating the venerable MiG-17s. All three units were dedicated to the close support role.

⁴²⁵ Al-Akhbar (Cairo), 27 September 1966; 'News on Syria, Lebanon and Iraq', Docket no 435/586.011, MLM Archives, 3 October 1966.

⁴²⁶ Maoz, Assad, pp. 47, 63-64. Jamil, appointed C. in C. after many years of the SAF refraining from elevating a non-aviator to its headship, later fell from grace due to his growing involvement in politics Assad's consequent fear of his increasing dominance within the air force.

Table 18: Syrian Air Force Order of Battle, 5 June 1967

Base	Unit	Aircraft type	Number Operational
Damascus-Mezze	3rd Brigade		
	No. 1 squadron	MiG-17F/PF	15
	No. 10 squadron	MiG-17F/PF	15
	No. 19 squadron	MiG-17F/PF	10
	No. 40 flight	Ilyushin IL-28R	3
	No. 60 flight (*)	Ilyushin IL-14	11
		Mil Mi-4	8-10
Dumeir	7th Brigade		
	No. 54 squadron	MiG-21F13	22
	No. 77 squadron	MiG-21F13	23
	No. 70 squadron	MiG-21FL	10
T-4	No. ? flight (**)	MiG-21FL	5
Marj-Ruheil		MiG-17F	12
		MiG-21	?
Halab/Neirab	CENTRAL	L-29 Delfin	21
	FLYING	MiG-15UTI	10
	SCHOOL	DHC-1 Chipmunk	25
		Yak-11	10
		Yak-18	10

(*) May be augmented for transport duties by aircraft of Syrian Arab Airways

(**) Squadron partially operational. Most aircraft in various stages of assembly.

Table 19: Syrian Air Force Bases, 5 June 1967

Air Base	Coordinates	Longest runway (m)	Shelters	Status
Bir Kutni	N3517 E3804	2743 (compacted soil)	None	Emergency Airfield
Damascus-Mezze	N3329 E3614	2545 (asphalt)	7 pens 4 hangars	Operational
Damascus-Int'l	N3322 E3631	3688 (concrete)	None	Emergency Airfield
Deir-ez-Zor	N3517 E4011	2500 (asphalt)	None	Emergency Airfield
Dumeir	N3337 E3645	2570 (concrete)	8 pens 2 hangars	Operational
Halab-Neirab	N3611 E3713	2865 (asphalt)	15 pens 2 hangars	Operational (CENTRAL FLYING SCHOOL)
Hammat	N3507 E3643	2600 (asphalt)	10 pens 3 hangars	Emergency Airfield
Marj-Ruheil	N3317 E3627	2440 (compacted soil)	Several sheds	Emergency Airfield
Seiqal	N3341 E3709	2440 (compacted soil)	8 sheds	Emergency Airfield
Rassem-el-Abboud	N3611 E3735	2500 (asphalt)	10 pens 2 hangars	Emergency Airfield
T-4	N3431 E3738	2865 (asphalt)	2 hangars	Operational

Table 20: Syrian Air Force Radar Stations Disposition, 5 June 1967

Location	Coordinates	Radar Type	Remarks
Damascus	N3329 E3614	Neisse	At the airbase
Damascus	N3329 E3614	P-8	Ditto
Damascus	N3329 E3614	P-30	Ditto
Damascus	N3332 E3616	P-30	On Kassius Mountain
Dar'ah	N3239 E3603	P-8	
Dar'ah	N3237 E3610	P-30	
Deir-ez-Zor	N3520 E4008	Neisse	
Dumeir	N3337 E3644	P-30	
Dumeir	N3337 E3644	P-8	
Germanah	N3329 E3621	P-8	
Halab		P-8	
Hammat	N3507 E3639	P-8	
Hammat		Neisse	
Kafreyn	N3325 E3631	Neisse	
Shab'ah	N3326 E3632	P-30	
Sheikh-Maskin	N3250 E3609	P-8	On the Golan Heights
Sheikh-Maskin	N3250 E3612	Neisse	Ditto
T-4	N3431 E3738	P-30	
Tadmur	N3434 E3814	Neisse	
Tartus	N3451 E3555	Neisse	
Tartus	N3451 E3555	P-8	
Zanmeyn	N3305 E3612	P-8	

Table 21: Syrian Air Force Radar Stations Coverage

Radar Type	Purpose	Up to 5,000ft	Up to 10,000ft	Up to 20,000ft	Up to 40,000ft	Remarks
Neisse	EW	40	47	54	50	
	Interception	40	47	52	28	
P-8	EW	25	40	52	60	
	Interception	25	40	52	60	Low accuracy
P-30	EW	70	95	125	100	
	Interception	42	65	49	49	

EW- Early warning

Table 22: Syrian Air Force Losses by aircraft Type on the Ground and in the Air,

June 1967

Aircraft Type	Total in Service	Destroyed	%
MiG-21F/FL	60	32	53.0
MiG-15/17F	50	23	46.0
Ilyushin IL-14	11	3	27.3
Ilyushin IL-28R	3	2	67.0
Mil Mi-4	8-10	4	40.0
Undisclosed		2	
Total	134	66	49.0

Source: IAF Air Historical Branch Archives

Table 23: Israel Air Force Losses or Damage during Operations over Syria, June 1967

Date	Aircraft Type	Location	Circumstances	Remarks
5/6/67	Mirage IIICJ	Over Damascus Int'l Airport	Shot down by SAF MiG-21 using Atoll AAM	
5/6/67	Super-Mystere	Over Dumeir AB	Shot down by anti-aircraft fire	
5/6/67	Vautour IIA	Over Dumeir AB	Shot down by SAF MiG-21	
5/6/67	Mirage IIICJ	Unknown	Damaged by debris from downed SAF MiG-21	
5/6/67	Mirage IIICJ	Over Damascus Int'l Airport	Shot down by SAF MiG-21 or anti-aircraft fire	
5/6/67	Mystere IVA	Over Damascus Int'l Airport	Shot down by anti-aircraft fire	
5/6/67	Mystere IVA	En-route to Damascus	Shot down by anti-aircraft fire	
7/6/67	Mystere IVA	Golan Heights	Shot down by anti-aircraft fire	
7/6/67	Mirage IIICJ	Golan Heights	Damaged by SAF MiG-21 using Atoll AAM	Landed safely at Meggido
8/6/67	MD-450 Ouragan	Golan Heights	Shot down by anti-aircraft fire	
8/6/67	Super-Mystere	Golan Heights	Damaged by anti-aircraft fire	Landed safely at

				Ramat-David	
9/6/67	Super-Mystere	Vasset Junction, G. Heights	Shot down by anti-aircraft fire		
9/6/67	CM170R Magister	Golan Heights	Shot down by anti-aircraft fire		
10/6/67	Super-Mystere	Nr. Quneitrah	Bombs exploded under wing		
10/6/67	Mirage IIICJ	SW of Sheikh-Maskin, G.H	Shot down by anti-aircraft fire		
10/6/67	MD-450 Ouragan	East of Lake Kineret	Shot down by anti-aircraft fire		
10/6/67	MD-450 Ouragan	Golan Heights	Shot down by anti-aircraft fire		

Source: IAF Air Historical Branch Archives

Table 24: Syrian Air Force Losses in Air to Air Combat, June 1967

Date	SAF aircraft involved	IAF aircraft involved	Location	Circumstances
5/6/67	MiG-21	Super-Mystere	T4 AB	Shot down in air combat
5/6/67	MiG-21	Super-Mystere	T4 AB	Ditto
5/6/67	MiG-21	Mirage IIICJ	Damascus	Ditto
5/6/67	MiG-21	Mirage IIICJ	Damascus	Ditto
5/6/67	MiG-21	Mirage IIICJ	Damascus	Ditto
5/6/67	MiG-21	Mirage IIICJ	Damascus	Ditto
5/6/67	MiG-21	Mirage IIICJ	Damascus	Ditto
5/6/67	MiG-17	Mirage IIICJ	Golan-Heights	Ditto
5/6/67	MiG-17	Mirage IIICJ	Golan-Heights	Ditto
5/6/67	MiG-17	Mirage IIICJ	Golan-Heights	Ditto
9/6/67	MiG-21	Mirage IIICJ	T4 AB	Ditto, Pilot Rif'at ejected safely.

Source: IAF Air Historical Branch Archives

Conclusion

This dissertation examined the first twenty years of the Syrian Air Force, during which it fought two major wars against Israel, enjoying partial success in the first and total failure in the second. This state of affairs was a corollary of the gradual and consistent deterioration of the SAF's performance stemming from the force's pervasive politicization and the attendant erosion of professional standards, without which no state-of-the-art apparatus, such as a modern air force, can function.

The speedy withdrawal of French forces from Syria in July 1945, following French Vichy's collapse the previous year, and the formation of an indigenous military establishment, brought about the hasty formation of a Syrian air arm. This was the first time the Syrian regime was confronted with a hitherto unknown form of military organization. It required a wide spectrum of professional expertise, highly educated and trained airmen, both flying and technical, and a sound infrastructure of bases and facilities. Additionally, it had to be achieved in a very short time, as trouble was looming over the horizon.

RAF Marshal Sir John Cotesworth Slessor (1897-1979), one of the early theorists of air power, argued that interdiction attacks against enemy forces were a crucial element of air power and should therefore take preference over attacks near the land battlefield (i.e., not on the tactical, but rather on the operative level).⁴²⁷ Syria's unique geopolitical position - a vast country

⁴²⁷ Sir John Slessor, *Air Power and Armies* (London: Oxford University Press, 1936), cited in Karl Mueller & Robert Denemark (ed.), *The International Studies Encyclopedia* (Oxford: Wiley-Blackwell 2010), vol. 1, pp 47-65.

surrounded by five uneasy neighbours, torn by domestic divisions, embargoed by the west, and left in disarray by the former imperial master - meant that it could never aspire to efficiently fulfil Slessor's theory and primarily defend its army during the 1948 Palestine invasion. Confronting the embryonic IAF, devoid of dedicated combat aircraft during the first three weeks of the war, the SAF should have exploited this and deploy its squadron of makeshift light bombers into an aggressive/offensive fist, pounding the meagre IDF with its meagre anti-aircraft defences. This would have enabled the Syrian Army to advance deep into Israel, conquer its populace and destroy its army. Despite having the theoretical ability to do so, the SAF's success was limited and short-lived and failed after only three months, in a war which lasted ten months, and led the SAF to a premature retreat to its bases not to be seen over the battlefield again. On the positive side, the Syrians managed to form a nucleus of an air element speedily despite an arms embargo and inability to procure dedicated combat aircraft, as well as to inflict some damage during the 1948 war, second only in extent to the Egyptian air force. A non-Syrian scholar described the SAF support during the battle for Mishmar Hayarden as 'impressive'.⁴²⁸

An infantry officer during the war, later army C. in C., opined that from the outset the army did not trust the SAF as it had failed them during the initial phases of the war.⁴²⁹ A Syrian army POW told IDF interrogators that the SAF's halting of operations was due to lack of adequate aircraft and qualified air crews and exhausted stocks of spare parts, fuel and ammunition, noting that the appearance of IDF combat aircraft by July had brought to an end what was already a fading presence.⁴³⁰ In its predicament, the SAF sought help from Iraq and

⁴²⁸ Pollack, *Arabs at War*, p. 45.

⁴²⁹ Nafoury, *al-Jeish al-Suri fi Filastin*, pp 2-3.

⁴³⁰ Carmeli Brigade, *No. 11 Battalion Report on the Interrogation of Syrian POW*, 21 July 1948, IDFA 15-715-1949

Pakistan, the former sending a squadron of Hawker Fury fighters and lending a couple of Avro Anson light bombers. Nuri Said, long time Iraqi prime minister told his parliament that 'Our brothers in Syria will get complete air cover from us, and our aircraft will continue to be based there until no longer required'. The Pakistani response was less enthusiastic, and practically went unanswered.⁴³¹ Ultimately the Arab/Muslim world was not keen to come to Syria's rescue, something the Syrians in general, and the SAF in particular, would experience yet again during the 1967 war. Accepting that there was no effective morale boosting from external aid, the SAF internalized that a deep reform was required if it was to remain a viable factor within the armed forces.

The Syrian army's failure in 1948 gave the Syrian officer corps a reason to initiate a quick succession of nearly sixteen coup d'etats. This had the proclaimed aim of deposing the 'corrupt and weak' civil government, which was considered responsible for the defeat. It also appointed army officers, allegedly to enable the army to function effectively in place of an ineffective government. The first coup, on 30 March 1949 by Col. Hussni Zaim, for example, was intended to deter the government from curtailing the army's budget, and prepare a 'truly democratic regime'.⁴³² Sami Hinawi's excuse for deposing Zaim after only five months in power was the former's 'crimes and corruption'. These were the same problems that characterised Adib Shishakli, his successor, who went as far as to ban all party and political activities in Syria, and appointed his loyal followers to senior posts and himself as deputy prime-minister in addition to, heading the army. Soon the military rulers became brutal dictators, using army resources to strengthen their hold of power and fight their political opponents. Patrick Seale's assertion that

⁴³¹ Al-Jundi al-Lubni (Beirut), June 1951, p. 31.

⁴³² Beerli, Army Officers, p. 57.

the Syrian army became ‘an unashamedly political instrument’⁴³³ serves to prove that during the years after the 1948 war the deterioration of the Syrian army in general, and the SAF in particular, laid in the deepening intervention of political powers in the armed forces. For over ten consecutive years the SAF distanced itself from involvement in the growing tension and frequent border skirmishes between Syria and Israel, despite investing heavily in the acquisition of the latest fighter aircraft, developing the infrastructure, and consolidating air crew training methods along modern Soviet lines. Such a professional body as an air force, possessing the most advanced technology of all the armed forces branches, should have centred its efforts on deepening professionalism and refrain from involvement in political affairs. However, in an atmosphere where an officer's career and promotion was influenced by his political affiliation, the SAF high command was soon staffed with politically loyal officers, not necessarily the best professional officers.

The brief union with Egypt (1958-61) should on the face of it have benefitted the SAF. In reality, it proved to be disastrous. Egypt throughout the UAR period sought to dominate Syria rather than treat it as an equal partner. One episode, recalled by Mustafa Tlas, then a junior officer, later Minister of Defence and a close confidant of President Assad, best illustrates the poisonous situation in which the SAF found itself. The Egyptian Mukhabarat (intelligence service) was deeply involved in the Syrian psychological pilot selection process. While being questioned by Egyptian psychologists, Mukhabarat officers used to tap on the candidate's neck.

⁴³³ Seale, The Struggle for Syria, p. 118.

If the candidate showed anger, he was automatically rejected as having 'a bad temper', similarly if he refrained from reacting, he was considered 'apathetic'.⁴³⁴

Following three years of almost complete annihilation as a result of the UAR, the final, relatively stable years of the Baath Party in power sealed the melting pot that brought about a complete fusion of the military into Syria's political life. With the party's firm and aggressive stance against Israel, the SAF was forced to encounter the most effective and powerful air arm in the Middle-East, with only meagre means. It could not take full advantage of cooperating with its neighbours (through the UAC) because of incessant external disputes and growing internal strife, some emanating from ethnic rifts between senior army leadership members, in certain cases leading to the involvement of the SAF, particularly since Hafez Assad's position in the ruling junta strengthened. Although Assad last flew as an active pilot in 1958, he was very popular within the ranks and used his influence to remove his opponents and instil his cronies.

Under Assad as SAF C. in C., the force's offensive attitude increased dramatically, and from 1962 to the 1967 war the SAF was involved in several skirmishes with the IAF, culminating in the loss of ten aircraft with no victories at all.⁴³⁵ This was in stark contrast to the ineffectiveness of the SAF during the first ten years following the 1948 war, characterized by a complete standstill undeterred by numerous IAF challenges. The Syrian regime's tendency to disguise its failures by dispersing propaganda that praised SAF pilots for their 'achievements' prevented the implementation of a debriefing culture in which failures are analysed and

⁴³⁴ Pesach Malovany, Out of the North an Evil Shall Break Forth (Tel-Aviv: Contento de Semrik; Hebrew), p. 201.

⁴³⁵ One each MiG-21 on 14 July 1966 and 15 August 1966, one MiG-17 on 15 August 1966 and seven MiG-21 on 7 April 1967

conclusions made, to learn from mistakes and at least minimise, if not prevent, their reoccurrence.

The second Syrian-Israeli major war in June 1967 proved disastrous. The SAF's involvement during the first day was dismal. The sporadic and erratic offensive operations within Israel were useless and had no effect on the IDF, which at the time was fully employed on the Egyptian front. By the end of the first day, the SAF retreated (as it did in July 1948) to its bases concentrating its efforts on protecting the regime by patrolling around Damascus and other major centres of power and refraining from any offensive operations. Furthermore, contrary to earlier agreements forged within the UAC, the SAF refrained from coming to the aid of the Jordanian air force despite frantic calls from Amman to prevent the complete annihilation of Jordan's single fighter squadron, destroyed on the ground during the first day of war. Contributing to the failure was the complete collapse of the UAC, an instrument thought to have been the glue which should have formed a grand military power with synergic qualities against a weaker opponent. In reality it never worked; as the Egyptian and Jordanian air forces were practically eradicated; the Lebanese air force insignificant and the Iraqi air force partially paralyzed. Such was the sorrow state of the SAF that the IAF high command decided not to bother and annihilate it in its entirety as it did in Egypt, and contented itself with destroying only a third of this force.⁴³⁶ A senior IDF intelligence officer asserts in a recently published study that the SAF's reluctance to operate over the battlefield stemmed from the Baath's instruction to concentrate the air efforts on saving the leadership in case the IDF attempted to advance towards Damascus. In his opinion, the Soviets

⁴³⁶ Interview with Major Yossi Sarig, an IAF fighter pilot during the 1967 war, later chief of research at the IAF's intelligence department, 21 October 2014

quickly rearmed Syria after the war so as to prevent domestic pressures to remove those responsible for the defeat.⁴³⁷

Ever since the era of frequent coups, and the years that followed, the SAF became ever deeply involved in politics, particularly during the reign of the Baath. SAF involvement became frequent, the bombing of Aleppo's radio station by SAF pilots opposed to the union with Egypt, overflying Damascus at low altitude during the Baath coup in 1962, the bombing of the Dabura and Sarakab radio stations in 1963, and the serious incident where army units approaching Dumeir air base were strafed by SAF jets which ended only after a serious persuasion effort by Assad. During the Neo-Baath coup of 1966 the SAF, under orders from the political leadership, took over the capital's communications centre and radio station.⁴³⁸ As part of the failed Hatum putsch (8 September 1966) Assad ordered the SAF to perform low demonstrative flights over Suweida and when that was not persuasive enough, ordered the bombing of Suweida's citadel. Echoing the growing military/politics symbiosis was Halil Mustafa, a former intelligence officer who is quoted to have argued that 'the [Syrian] air force is unable to defend its country because pilots were ousted after having been suspected of disloyalty, and hid their aircraft in their pens [aircraft shelters] so as to avoid their use by non-Ba'athists'. He added: 'The [Syrian] army is busy with politics 18 hours a day, eats and sleeps five hours a day and trains only one hour a day. From such an army you cannot expect any results in time of need'.⁴³⁹

⁴³⁷ Malovany, *Out of the North*, p. 255

⁴³⁸ Ibid, pp. 136, 140, 148, 154

⁴³⁹ Mustafa, *The Collapse of the Golan*, p. 225, as cited in Malovany, p. 254. Mustafa was the senior intelligence officer in the Syrian army responsible for the Golan front up to the 1967 war, later a staunch critic of the Syrian regime.

The greatest possible damage from the Baath's pervasive penetration of the Syrian military was the transformation of the army into a branch of a nepotistic dictatorship under the Assad family. After 1970 an officer seeking promotion had to affiliate himself not only with the party but with the leader cult. Concurrently the leader would not necessarily promote officers according to their professionalism but rather to their loyalty, indeed subservience.⁴⁴⁰ The consequences of this trend were starkly demonstrated during the October 1973 war and all the more so in the 1982 Lebanon war that cost the SAF 102 aircraft compared to nil casualties to the IAF.

⁴⁴⁰ Such as had been the case of Naji Jamil, an aircraft engineer who was nominated by Assad to SAF's C.in C. in 1971 despite strong opposition from within the aircrew ranks.

Abbreviations

AAM – Air-to-Air Missile

AB – Air Base

ADD – Air Defence Department

ADN – Air Defence Network

ALA - Arab Liberation Army

AOP - Air Observation & Patrol

APC – Armored Personnel Carrier

ATC – Air Traffic Control

CFS – Central Flying School

CIA – Central Intelligence Agency

CIDNA – Compagnie Internationale de Navigation Aerienne (joint French/Syrian airline)

C.in C. – Commander in Chief

CO – Commanding Officer

C.o S. – Chief of Staff

EAF – Egyptian Air Force (from 1952)

EW – Electronic Warfare

FS – Flying School

GAC – Gloster Aircraft Company

GACHAL – Giyus Chutz La’ Aretz (Foreign Recruits of the IDF)

HAS – Haganah Air Service (“Sherut-Avir”)

HAS – Hardened Air Shelters (at air bases)

HQ - Headquarters

IAF – Israeli Air Force

IAL – International Aeradio Company

ICAO – International Civil Aviation Organization

IDF – Israel Defence Force

IDFAF – Israel Defence Force/Air-Force

ILP – Israeli Lira (Pound Currency)

IN – Israeli Navy

INS – Israeli Navy Ship

IPC – Iraq Petroleum Company

Ir.AF – Iraqi Air Force (from 1958)

LAF – Lebanese Air-Force

LCT – Landing Craft-Tank

MACHAL – Mitnadvey Chutz-La’Aretz (Hebrew) (Foreign Volunteers to the IDF)

MiG – Mikoyan & Gurevitch (Soviet aircraft design bureau)

NAPALM – **N**apthenic Acid and **P**almitic Acid (incendiary weapon)

NATO – North Atlantic Treaty Organization

NCO – Non-Commissioned Officer

NE – North-East

NW – North-West

OCU – Operational Conversion Unit

OFLC – Office of the Foreign Liquidation Commissioner (American)

OTU – Operational Training Unit

P - Pilot

POW – Prisoner of War

RAF – (British) Royal Air-Force

REAF – Royal Egyptian Air-Force (1936-1952)

RG- Rear Gunner

RIAF – Royal Iraqi Air-Force (1936-1958)

RJAF – Royal Jordanian Air-Force
SA – Syrian Airways
SAA – Syrian Arab Airlines
SAAF – South-African Air-Force
SAF – Syrian Air-Force
SAIDE – Services Aeriens Internationaux d’Egypte
SAM – Surface to Air Missile
SE – South-East
SSNP – Syrian Socialist Nationalist Party
SyP – Syrian Pound
TAF – Turkish Air-Force
TAP – Trans Arabian Pipeline
UAA – United-Arab Airlines
UAC – Unified Arab Command
UAR – United Arab Republic
UARAF – United Arab Republic Air-Force
UK – United-Kingdom
UN – United-Nations Organization
USA - United States of America
USAF – United-States of America Air-Force
USD – United-States of America Dollar
USSR – Union of Socialist States Republic
VFS – Voice of Free Syria (radio station)
WAA – War Assets Administration (American)
WW – World War

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